

OM of: us-10-726-967a-1 to: rsep2ndb.* out_format : pfs

Date: Wed Aug 3 11:58:53 2005

About: Results were produced by the Gencore software, version 5.1.6,
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Command line parameters:

-MODE=frame+pn.model -DEV=soft -Q=us-10-726-967a-1 -DB=rsep2ndb -SUFFIX=pfs
-OUT=10726967-1_22-41vsSID5htst.p2n.rst -MINMATCH=0.1 -LOOCL=0 -LOOPEXT=0
-UNITS=bits -START=22 -END=41 -MATRIX=blomsum62 -TRANS=human40.cdi -LIST=500
-DOCALLIGN=200 -THR SCORE=pct -THR MAX=100 -ALIGN=500 -MODE=LOCAL
-OUTPMT=pfs -NOR=ext -HEADSIZE=500 -MINLEN=0 -MAXLEN=2000000000 -NCPU=6
-NO_XLPHY -NES SCORES=0 -LONGLOG -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -XGAPOP=10 -XGAPEXT=0.5 -DELOP=6 -DELEXT=7

Search information:

Query: us-10-726-967a-1
Query length: 20
Database: rsep2ndb.*
Database sequences: 12
Database length: 32050
Search time (sec): 1

Score list:

Sequence	Strd	Orig	ZScore	EScore	Len	Documentation	...
rsep2ndb:AY417360	+	104.00	75.89	0.4823	1506	ACCESSION:AY417360	Homo sapiens
rsep2ndb:BX376891	+	87.00	70.83	1.01	1123	ACCESSION:BX376891	Homo sapiens
rsep2ndb:AY417362	+	77.00	64.48	2.01	1506	ACCESSION:AY417362	Mus musculus
rsep2ndb:AK041285	+	77.00	60.49	3.27	3634	ACCESSION:AK041285	Mus musculus
rsep2ndb:AK041464	+	77.00	60.22	3.37	3859	ACCESSION:AK041464	Mus musculus
rsep2ndb:AK031112	+	77.00	60.20	3.38	3877	ACCESSION:AK031112	Mus musculus
rsep2ndb:AK082317	+	77.00	60.00	3.46	4048	ACCESSION:AK082317	Mus musculus
rsep2ndb:AK04175	+	77.00	59.94	3.48	4101	ACCESSION:AK04175	Mus musculus
rsep2ndb:AK06175	+	68.00	56.48	5.21	3805	ACCESSION:AK06175	Mus musculus
rsep2ndb:AK082230	+	60.00	53.01	7.61	3880	ACCESSION:AK082230	Mus musculus
rsep2ndb:AK080498	+	60.00	53.01	7.61	3880	ACCESSION:AK080498	Mus musculus
rsep2ndb:AK080498	+	60.00	53.01	7.61	3880	ACCESSION:AK080498	Mus musculus
rsep2ndb:BX376891	+	35.00	48.06	12.32	1123	ACCESSION:BX376891	Homo sapiens
rsep2ndb:AK041285	-	33.00	41.90	19.09	3634	ACCESSION:AK041285	Mus musculus
rsep2ndb:AK082230	-	33.00	41.69	19.30	3805	ACCESSION:AK082230	Mus musculus
rsep2ndb:AK041464	-	33.00	41.63	19.36	3859	ACCESSION:AK041464	Mus musculus
rsep2ndb:AK031112	-	33.00	41.61	19.38	3877	ACCESSION:AK031112	Mus musculus
rsep2ndb:AK080498	-	33.00	41.60	19.38	3880	ACCESSION:AK080498	Mus musculus
rsep2ndb:AK082317	-	33.00	41.41	19.57	4048	ACCESSION:AK082317	Mus musculus
rsep2ndb:AK04175	-	33.00	41.35	19.62	4101	ACCESSION:AK04175	Mus musculus
rsep2ndb:AK06175	-	33.00	41.35	19.62	4101	ACCESSION:AK06175	Mus musculus
rsep2ndb:AY417360	-	32.00	45.47	15.21	1506	ACCESSION:AY417360	Homo sapiens
rsep2ndb:AY417360	+	28.00	50.44	9.89	346	ACCESSION:AY417360	Mus musculus
rsep2ndb:AY417360	+	28.00	50.20	10.12	365	ACCESSION:AY417360	Mus musculus
rsep2ndb:AY417360	-	27.00	50.01	10.30	346	ACCESSION:AY417360	Mus musculus
rsep2ndb:AY417360	-	27.00	49.77	10.54	365	ACCESSION:AY417360	Mus musculus
rsep2ndb:AY417362	-	27.00	43.35	17.57	1506	ACCESSION:AY417362	Mus musculus

Sequence documentation:

LOCUS AY417360 1506 bp DNA linear GSS 17-DEC-2003
DEFINITION Homo sapiens BACE gene, partial sequence,
genomic survey sequence.

ACCESSION AY417360
VERSION AY417360.1 GI:39773320

KEYWORDS GSS.
SOURCE Homo sapiens (human)

ORGANISM

Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 (bases 1 to 1506)
Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejarival,A.,
Todd,M.A., Tanenbaum,D.M., Civejlo,D.R., Lu,F., Murphy,B.,
Ferreira,S., Wang,G., Zheng,X.H., White,T.J., Smitsky,D.J.,
Adams,M.D. and Cargill,M.

TITLE

Inferring nonneutral evolution from human-chimp-mouse orthologous
gene trios

JOURNAL

Science 302 (5652), 1960-1963 (2003)

PUBMED

14673302
2 (bases 1 to 1506)

REFERENCE

Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejarival,A.,
Todd,M.A., Tanenbaum,D.M., Civejlo,D.R., Lu,F., Murphy,B.,
Ferreira,S., Wang,G., Zheng,X.H., White,T.J., Smitsky,D.J.,
Adams,M.D. and Cargill,M.

TITLE

Direct Submission
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive,
Rockville, MD 20850, USA

COMMENT

This sequence was made by sequencing genomic exons and ordering
them based on alignment.

FEATURES

source
1..1506
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/gene="BACE"
/locus_tag="HCM6198"

Alignment of: us-10-726-967a-1 x AY417360

Alignment segment 1/1: (+)
Quality: 104.00
Matching Length: 20
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00

Alignment:

22 ThrGlnIsgIlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGATCGGCTGCGCGAGCGGCTGGGGGGGCGCC 113

38

CTGGGCTG 41
114 CTGGGCTG 123

Sequence name: rsep2ndb:BX376891

Sequence documentation: 1123 bp mRNA linear EST 23-APR-2004
LOCUS BX376891 1123 bp mRNA linear EST 23-APR-2004
DEFINITION Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED Homo sapiens
CDNA clone CS00D007Y18 5-PRIME, mRNA sequence.

ACCESSION

VERSION BX376891.2 GI:46556538
KEYWORDS EST.

SOURCE

ORGANISM Homo sapiens (human)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 (bases 1 to 1123)

AUTHORS Li, W.B., Gruber, C., Jesse, J. and Polayes, D.
 TITLE Full-length cDNA libraries and normalization
 JOURNAL Unpublished (2001)
 COMMENT On May 8, 2003 this sequence version replaced gi:30434929.

Contact: Genoscope
 Genoscope - Centre National de Sequencage
 2 rue Gaston Crémieux, CP 5706 - 91057 EVRY cedex - FRANCE
 Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
 end enriched, double-strand cDNA was digested with Not I and cloned
 into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
 was normalized. Library was constructed by Life Technologies, a
 division of Invitrogen. This sequence belongs to sequence cluster
 5902.r

For more information about this cluster, see
 http://www.genoscope.cns.fr/cdata/b=CS0DD007DH09QPI&c=5902.r.

FEATURES
 source
 location/Qualifiers

1..1123
 /organism="Homo sapiens"
 /mol_type="mRNA"
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 /clone="CS0DD007YPI8"
 /tissue_type="NEUROBLASTOMA COT 50-NORMALIZED"
 /clone_lib="Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED"
 /note="1st strand cDNA was primed with a NotI-oligo(dT)
 primer. Five prime end enriched, double-strand cDNA was
 digested with Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."

Alignment of: us-10-726-967a-1 x BX376891 ..

Alignment segment 1/1: (+)

Matching	Quality:	87.00	Score:	1.01
Percent length:	20	Total length:	20	
Percent Similarity:	95.00	Matching Percent Identity:	95.00	
Total Percent Similarity:	95.00	Total Percent Identity:	95.00	
Gaps:	0			

Alignment:

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22 ThrGlnH1g1y11eargLeuProluArGserG1yleuG1yAlaPr 38
|||||
501 ACCGACGACGCGATCCGCTCCCTCCGCCGACGCGCTGGAGGCGCC 549
|||||
38 cleuG1yleu 41
|||||
550 CCTGGGCGCTC 559

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Sequence name: rstrip2ndb:AY417362

Sequence documentation:

LOCUS AY417362 1506 bp DNA linear GSS 17-DEC-2003
 DEFINITION Mus musculus BACE gene, VIRTUAL TRANSCRIPT, partial sequence,
 genomic survey sequence.
 ACCESSION AY417362
 VERSION AY417362.1 GI:39773322
 KEYWORDS GSS.
 SOURCE Mus musculus (house mouse)
 ORGANISM Mus musculus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE
 AUTHORS Clark, A.G., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
 Ferreria, S., Wang, G., Zheng, X.H., White, T.J., Shtinsky, J.J.,
 Adams, M.D. and Cargill, M.

TITLE
 gene tricos
 inferring nonneutral evolution from human-chimp-mouse orthologous

JOURNAL
 PUBMED Science 302 (5652), 1960-1963 (2003)
 REFERENCE 14671302
 AUTHORS Clark, A.G., Ghanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,

Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
 Ferreria, S., Wang, G., Zheng, X.H., White, T.J., Shtinsky, J.J.,
 Adams, M.D. and Cargill, M.

COMMENT
 JOURNAL Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive,
 Rockville, MD 20850, USA
 This sequence was made by sequencing genomic exons and ordering
 them based on alignment.

FEATURES
 source
 location/Qualifiers

1..1506
 /organism="Mus musculus"
 /mol_type="genomic DNA"
 /db_xref="taxon:10090"
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 /gene="BACE"
 /locus_tag="HCW6198"

Alignment of: us-10-726-967a-1 x AY417362 ..

Alignment segment 1/1: (+)

Matching	Quality:	77.00	Score:	2.01
Percent length:	20	Total length:	20	
Percent Similarity:	90.00	Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00	Total Percent Identity:	80.00	
Gaps:	0			

Alignment:

```

22 ThrGlnH1g1y11eargLeuProluArGserG1yleuG1yAlaPr 38
|||||
64 ACCGATCGGCGATCCGCTCCCTCCGCCGACGCGCTGGAGGCGCC 113
|||||
38 cleuG1yleu 41
|||||
114 CCTGGGCGCTG 123

```

Sequence name: rstrip2ndb:AK041285

Sequence documentation:

LOCUS AK041285 3634 bp mRNA linear HTC 03-APR-2004
 DEFINITION Mus musculus adult male aorta and vein cDNA, RIKEN full-length
 enzyme, full insert sequence.
 ACCESSION AK041285
 VERSION AK041285.1 GI:26334342
 KEYWORDS HTC, CAP trapper.
 SOURCE Mus musculus (house mouse)
 ORGANISM Mus musculus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE
 AUTHORS Carninci, P. and Hayashizaki, Y.
 TITLE High-efficiency full-length cDNA cloning
 JOURNAL Meth. Enzymol. 303, 19-44 (1999)
 MEDLINE 99279253
 PUBMED 10349636

REFERENCE
 AUTHORS Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,
 Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.
 Normalization and subtraction of cap-trapper-selected cDNAs to
 prepare full-length cDNA libraries for rapid discovery of new genes
 Genome Res. 10 (10), 1617-1630 (2000)
 JOURNAL 20499374
 MEDLINE 11042159
 PUBMED 11042159

REFERENCE
 AUTHORS Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,
 Kono, H., Akiyama, J., Nishi, K., Kitsuai, T., Tashiro, H., Itoh, M.,
 Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A.,
 Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K.,
 Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Matsubara, S.,
 Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J.,
 Okazaki, Y., Muramatsu, M., Inoue, Y., Kita, A. and Hayashizaki, Y.

TITLE
RIKEN integrated sequence analysis (RISA) system--384-format
sequencing pipeline with 384 multicapillary sequencer
Genome Res. 10 (11), 1757-1771 (2000)

JOURNAL
MEDLINE
20530913
11076861

REFERENCE
4
The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)

JOURNAL
REFERENCE
AUTHORS
5
The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)

JOURNAL
REFERENCE
AUTHORS
6
(bases 1 to 3634)
Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagata, T., Hara, A., Hashizume, M., Hayashida, K., Hayatsu, N., Hiramoto, T., Hirooka, T., Hirozane, T., Kato, H., Kawai, J., Kojima, Y., Kondo, S., Kono, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.
Direct Submissions
Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Kanagawa 230-0045, Japan (E-mail:genome-research@riken.jp, URL: http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to prepare mouse libraries.
Please visit our web site for further details.
URL: http://genome.gsc.riken.jp/
URL: http://fantom.gsc.riken.jp/
Location/Qualifiers
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/tissue_type="aorta and vein"
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/protein_id="BAC30889.1"
/db_xref="GI:26334343"
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AATRESKPRINSNMGIIIGLAAIARDDSIPEPDSLVKOTHPNIPSLQCA
GFLNQTALASVSGSKITGIDHSLTGSLSMTPIRREYEVITTRVEINQDLN
DCBEYNDKSIIVDSGTNLRPKKVFPAASSTKPEPGFGLQVLCWQNG
TTPMNIPFVLSYLMGEVNTQSPRIITLIPQYLRPVDVATSDCCYKAFVSGSST
VMGAVIMEGYVVFDRARKRIGFAVSAHVHDEPRTAAVSGPFTADMEDCGYNIPT

TITLE
DESLTMTIAYMAICALFMLPLCLMWQCWRCLRLRHQHDPEADISLTK"

JOURNAL
MEDLINE
20530913
11076861

REFERENCE
4
The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)

JOURNAL
REFERENCE
AUTHORS
5
The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

TITLE
22 ThrGlnHisGlyTleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
513 ACCCATCTCGGATCCGGCTGCTCCCTTCGACAGGCGCTGGACGCCACC 562
38 OluGlyLeu 41
563 CCTGGGCGCTG 572

Sequence name: r5tp2ndb:AK014464

Sequence documentation: 3859 bp mRNA linear HTC 03-APR-2004
LOCUS AK014464
DEFINITION Mus musculus 16 days embryo head cDNA, RIKEN full-length enriched library, clone:4122401C04 product:beta-site APP cleaving enzyme, full insert sequence.
ACCESSION AK014464
VERSION AK014464.1 GI:12852334
KEYWORDS HTC; CAP trapper.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus (house mouse)
Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE
1
Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
10349636

REFERENCE
2
Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes
Genome Res. 10 (10), 1617-1630 (2000)

JOURNAL
MEDLINE
20499374
11042159

REFERENCE
3
Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kono, H., Akiyama, J., Nishi, K., Kitsuami, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujinake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watabiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsumura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kita, A. and Hayashizaki, Y.
RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer
Genome Res. 10 (11), 1757-1771 (2000)

JOURNAL
MEDLINE
20530913
11076861

REFERENCE
4
The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)

JOURNAL
REFERENCE
AUTHORS
5
The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohnato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.

TITLE
Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Kanagawa 230-0045, Japan (E-mail: genome-res@gscc.riken.jp, URL: http://genome-gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216)

COMMENT

cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.

FEATURES**SOURCE**

URL: http://genome-gsc.riken.jp/
URL: http://tancom.gsc.riken.jp/
Location/Qualifiers
1. 3877
/organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="PANTOM_DB:8030431G04"
/db_xref="taxon:10090"
/clone="8030431G04"
/sex="male"
/issue_type="testis"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="15 days embryo"
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/note="unlabeled protein product; beta-site APP cleaving enzyme (MGP|MGI:1346542, GB|NM_011792, evidence: BLASTN, 98%, match=3874)
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/protein_id="BAC28156.1"
/db_xref="GI:26328835"
/translation="MAPALHWLLWVSGMLPAQTHLIGRLPLRSGAGPPLGLRLP
RTDESEBGRGSPFVEMVNDLRKSGGGVYMTGSPPTNIIIVDSSFPARG
AARPRARYYQRLSTYRDLRKGVVPTQGBEELGDLNTHGPRVYTRANI
AATTSKPFITNSNMEGILGLAYARIPDLSLPPFDSLVKQTHLPIFLSCGA
GFLNQTALASVSGSMIGIDHSLYGLSLMTPIRREMYEYIIVRVEINGDLAM
DCEYNDKSIIVDSGTNRLPKKFLFAVKSIVKASSTKFPDGFMLGQVCMQAG
TTENYIPVLSLYMGVNTOSFRITILPOYLARVADVATSDODCKYFVSSOSTG
VMCAVMEGFYVVDPRARIRIGFVSAACHVDERFAVAGPPTADMEGQNIIPQT
DESTIMTATVMAIICLPMPLCLMVCQNRCLRCLRHQHDPAADISLCK"

CDS

Alignment of: us-10-726-967a-1 x AK03112 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	3.38
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuAysGergIleuGlyValAaPr 38
|||||
513 ACCCATCTCGGCATCGGCTCCCTTCACAGCGGCTGACAGGCGCAC 562
38 oleuGlyLeu 41
|||||
563 CCTGGGCGCTG 572

Sequence name: ret2pndb:AK082317

Sequence documentation:

LOCUS AK082317 4048 bp mRNA linear HTC 03-APR-2004

DEFINITION Mus musculus 0 day neonate cerebellum cDNA, RIKEN full-length enriched library, clone: C230037E16 product: beta-site APP cleaving enzyme, full insert sequence.

ACCESSION

AK082317

VERSION

AK082317.1 GI:26349644

KEYWORDS

HTC; CAP trapper.

SOURCE

Mus musculus (house mouse)

ORGANISM

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus; Mus.

REFERENCE

1 Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)

JOURNAL

99279253

MEDLINE

10349636

PUBMED

10349636

REFERENCE

2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.
Normalization and subraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes
Genome Res. 10 (10), 1617-1630 (2000)

JOURNAL

20499374

MEDLINE

11042159

PUBMED

11042159

REFERENCE

3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kono, H., Akiyama, J., Nishi, K., Kiteunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishie, T., Harada, A., Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwaka, S., Inoue, K., Togawa, Y., Izawa, M., Onara, E., Watanabe, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsumura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y.
RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer
Genome Res. 10 (11), 1757-1771 (2000)

JOURNAL

20530913

MEDLINE

11076861

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REFERENCE

4 The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)

JOURNAL

5

REFERENCE

5 The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)

JOURNAL

6

REFERENCE

6 (bases 1 to 4048)
Adachi, S., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirokawa, T., Horii, F., Inotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Kondo, S., Kono, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohnato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.

JOURNAL

Submitted (16-APR-2002)

REFERENCE

Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Kanagawa 230-0045, Japan (E-mail: genome-res@gscc.riken.jp, URL: http://genome-gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216)

COMMENT

cDNA library was prepared and sequenced in Mouse Genome

TITLE

JOURNAL

KEYWORDS

HTC; CAP trapper.

SOURCE

Mus musculus (house mouse)

ORGANISM

Mus musculus

REFERENCE

1 Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)

JOURNAL

99279253

MEDLINE

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PUBMED

10349636

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JOURNAL

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Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues.
Please visit our web site for further details.
URL: <http://genome.gsc.riken.jp/>
URL: <http://fantom.gsc.riken.jp/>
Location/Qualifiers

FEATURES

source

1..4048
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AATSEKPEFTNSMBEITLALAYEARPDLSLPPFDSLAKQTHLPNIFSLQCGA
GPIPLNOTALASVGSMTIGIDHSLTYGSLMWYPIREWEYEVIVRAVINQDLK
DCKTEKRPDGFWMGEOLVCMQAGTTPMIFPVSLVYMGVYVIRILPOQYLR
PVEDVATISODCYKFAVSQSTGVAGVMEGVYVVDARAKRIGAVACVYHDF
RTAVVEGFTVADMEGCGYNIPQDESLMTIAYVMAAICLFLPLCLAVCCWRCLR
CLRQHDFADISILK"

CDS

Alignment of: us-10-726-967a-1 x AK082317 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Score:
20	77.00	3.46
Percent Similarity:	20	Total Length:
90.00	20	20
Total Percent Similarity:	90.00	Matching Percent Identity:
0	80.00	80.00
Gaps:	0	Total Percent Identity:
		80.00

Alignment:

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22 ThrGlnHisGlyIleArgLeuProteinArgSerGlyLeuGlyGlyAlaLys 38
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
514 ACCCATCTCGGCAATCGACTGCGCCCTTCGACAGCGCTGCGAGGCCACCC 563
38 olenglyleu
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564 CTGGGGCGCTG 573

```

Sequence name: rctp2ndb.AK046175

Sequence documentation:

LOCUS AK046175 4101 bp mRNA linear HTC 03-APR-2004
DEFINITION Mus musculus adult male corpora quadrigemina cDNA, RIKEN
full-length enriched library, clone:B230346M13 product:beta-site
APP cleaving enzyme, full insert sequence.
ACCESSION AK046175
VERSION AK046175.1 GI:26337868
KEYWORDS HTC; CAP trapper.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus

REFERENCE
AUTHORS Carninci, P. and Hayashizaki, Y.
TITLE Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
High-efficiency full-length cDNA cloning

JOURNAL
MEDLINE 99279253
PUBMED 10349636
REFERENCE

AUTHORS

TITLE

1. Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,
Itoh, M., Komno, H., Okazaki, Y., Muramatsu, M., and Hayashizaki, Y.
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Komno, H., Akiyama, J., Nishi, K., Katsunai, T., Tashiro, H., Itoh, M.,
Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A.,
Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K.,
Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watanabe, M.,
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sequencing pipeline with 384 multichannel sequencer
Genome Res. 10 (11), 1757-1771 (2000)

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TITLE

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Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)

JOURNAL

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AUTHORS

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Analysis of the mouse transcriptome based on functional annotation
of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)

JOURNAL

MEDLINE

PUBMED

REFERENCE

AUTHORS

6. Adachi, J., Aizawa, K., Akimura, T., Arikawa, T., Bono, H., Carninci, P.,
Hayashida, K., Hayatsu, N., Hiramoto, K., Hirooka, I., Hirozawa, T.,
Hori, F., Imotoh, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,
Kato, H., Kawai, J., Kojima, Y., Kondo, S., Komno, H., Kouda, M.,
Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,
Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohnato, N.,
Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,
Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,
Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,
Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,
Muramatsu, M., and Hayashizaki, Y.
Direct Submission

COMMENT

Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),
Kanagawa 230-0045, Japan (E-mail: genome-res@gsc.riken.jp,
URL: <http://genome.gsc.riken.jp/>, Tel: 81-45-503-9222,
Fax: 81-45-503-9216)

CDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues.
Please visit our web site for further details.
URL: <http://genome.gsc.riken.jp/>
URL: <http://fantom.gsc.riken.jp/>
Location/Qualifiers

FEATURES

source

1..4101
/organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
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/db_xref="taxon:10090"
/clone="B230346M13"
/sex="male"

COMMENT

On May 8, 2003 this sequence version replaced gi:30434929.

Contact: Genoscope
Genoscope - Centre National de Sequencage

2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE

Email: seqref@genoscope.cns.fr, web : www.genoscope.cns.fr

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by life technologies, a division of Invitrogen. This sequence belongs to sequence cluster 5902.r

For more information about this cluster, see
http://www.genoscope.cns.fr/cdnasr=CS0DD007DH09QPI&c=5902.r.

FEATURES

source

Location/Qualifiers

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/issue_type="NEUROBLASTOMA COT 50-NORMALIZED"

/note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."

Alignment of: us-10-726-967a-1 x BX376891 ..

Alignment segment 1/1: (-)

Matching Percent	Similarity	Quality	Score
64.29	14	35.00	12.3
64.29	14	57.14	14
64.29	14	57.14	14

Alignment:

25 GYIIEATGLeuProleuArgSerGlyLeuGlyAlaPro 38
||||| 181

Sequence name: refp2ndb:AK041285

Sequence documentation:

LOCUS AK041285 3634 bp mRNA linear HTC 03-APR-2004

DEFINITION Mus musculus adult male aorta and vein cDNA, RIKEN full-length enriched library, clone:A530097B07 product:beta-site APP cleaving enzyme, full insert sequence.

ACCESSION AK041285

VERSION AK041285.1 GI:26334342

KEYWORDS HTC; CAP trapper.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

REFERENCE 1 Carninci, P. and Hayashizaki, Y.

TITLE High-efficiency full-length cDNA cloning

JOURNAL Meth. Enzymol. 303, 19-44 (1999)

MEDLINE 99279253

PUBMED 10349636

REFERENCE 2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,

TITLE High-efficiency full-length cDNA cloning

JOURNAL Meth. Enzymol. 303, 19-44 (1999)

MEDLINE 99279253

PUBMED 10349636

REFERENCE 3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,

REFERENCE 4 Konno, H., Akiyama, J., Nishi, K., Kitanai, T., Tashiro, H., Itoh, M.,

TITLE

JOURNAL MEDLINE 20530913

PUBMED

REFERENCE

AUTHORS

TITLE

JOURNAL

REFERENCE

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REFERENCE

AUTHORS

Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A.,

Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K.,

Fujiwaka, S., Inoue, K., Togawa, Y., Iwata, M., Ohara, E., Matshiki, M.,

Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuzaki, S., Kawai, J.,

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Nature 420, 563-573 (2002)

6 (bases 1 to 3634)

Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P.,

Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W.,

Hayashida, K., Hayatsu, N., Hiramoto, K., Hirooka, T., Hirokawa, T.,

Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,

Kato, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,

Koyama, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,

Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohtsuo, N.,

Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,

Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,

Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaki-Akahira, S.,

Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,

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Direct Submision

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Physical and Chemical Research (RIKEN), Laboratory for Genome

Exploration Research Group, RIKEN Genomic Sciences Center (GSC),

RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,

Kanagawa 230-0045, Japan (E-mail: genome-res@gsc.riken.jp,

URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222,

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Genomic Sciences Center and Genome Science Laboratory in RIKEN.

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prepare mouse tissues.

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URL: http://genome.gsc.riken.jp/

URL: http://fantom.gsc.riken.jp/

Location/Qualifiers

1..3634

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/issue_type="aorta and vein"

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/dev_stage="adult"

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/note="unnamed protein product; beta-site APP cleaving

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SOURCE ORGANISM	Mus musculus (house mouse)
REFERENCE AUTHORS	Bukacynski, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE TITLE	1 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. High-efficiency full-length cDNA cloning
REFERENCE JOURNAL	1992, Meth. Enzymol. 303, 19-44 (1999)
REFERENCE PUBLISHED	10349656
REFERENCE AUTHORS	2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes
REFERENCE JOURNAL	2000, Genome Res. 10 (10), 1617-1630 (2000)
REFERENCE PUBLISHED	20499374
REFERENCE AUTHORS	3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kono, H., Akiyama, Y., Nishi, K., Katsuna, T., Teshito, H., Itoh, M., Suni, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watabiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format
REFERENCE JOURNAL	2000, Genome Res. 10 (11), 1757-1771 (2000)
REFERENCE PUBLISHED	20530913
REFERENCE AUTHORS	4 The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium. Functional annotation of a full-length mouse cDNA collection
REFERENCE JOURNAL	2001, Nature 409, 685-690 (2001)
REFERENCE PUBLISHED	11076861
REFERENCE AUTHORS	5 The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team. Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
REFERENCE JOURNAL	2002, Nature 420, 563-573 (2002)
REFERENCE PUBLISHED	6 (bases 1 to 3859)
REFERENCE AUTHORS	Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Arai, A., Aono, H., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hiramoto, K., Hirao, T., Hori, F., Imoto, K., Ishii, Y., Itoh, M., Izawa, M., Kasekawa, T., Kato, H., Kawai, J., Kojima, Y., Kono, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishik, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shibata, Y., Shingawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toyota, T., Yamamura, T., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.
REFERENCE JOURNAL	2000, Submitted (10-JUL-2000) Yoshinori Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan [E-mail: genome-res@gscc.riken.jp, URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216]
REFERENCE PUBLISHED	11042159
REFERENCE AUTHORS	3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kono, H., Akiyama, Y., Nishi, K., Katsuna, T., Teshito, H., Itoh, M., Suni, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watabiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format
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REFERENCE PUBLISHED	6 (bases 1 to 3859)
REFERENCE AUTHORS	Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Arai, A., Aono, H., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hiramoto, K., Hirao, T., Hori, F., Imoto, K., Ishii, Y., Itoh, M., Izawa, M., Kasekawa, T., Kato, H., Kawai, J., Kojima, Y., Kono, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishik, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shibata, Y., Shingawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toyota, T., Yamamura, T., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.
REFERENCE JOURNAL	2000, Submitted (10-JUL-2000) Yoshinori Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan [E-mail: genome-res@gscc.riken.jp, URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216]
REFERENCE PUBLISHED	11042159
REFERENCE AUTHORS	3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kono, H., Akiyama, Y., Nishi, K., Katsuna, T., Teshito, H., Itoh, M., Suni, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watabiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format
REFERENCE JOURNAL	2000, Genome Res. 10 (11), 1757-1771 (2000)
REFERENCE PUBLISHED	20530913
REFERENCE AUTHORS	4 The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium. Functional annotation of a full-length mouse cDNA collection
REFERENCE JOURNAL	2001, Nature 409, 685-690 (2001)
REFERENCE PUBLISHED	11076861
REFERENCE AUTHORS	5 The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team. Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
REFERENCE JOURNAL	2002, Nature 420, 563-573 (2002)
REFERENCE PUBLISHED	6 (bases 1 to 3859)
REFERENCE AUTHORS	Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Arai, A., Aono, H., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hiramoto, K., Hirao, T., Hori, F., Imoto, K., Ishii, Y., Itoh, M., Izawa, M., Kasekawa, T., Kato, H., Kawai, J., Kojima, Y., Kono, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishik, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shibata, Y., Shingawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toyota, T., Yamamura, T., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.
REFERENCE JOURNAL	2000, Submitted (10-JUL-2000) Yoshinori Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan [E-mail: genome-res@gscc.riken.jp, URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216]
REFERENCE PUBLISHED	11042159
REFERENCE AUTHORS	3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kono, H., Akiyama, Y., Nishi, K., Katsuna, T., Teshito, H., Itoh, M., Suni, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watabiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka,

strand cDNA was prepared with the primer adapter of sequence [5', GAGAGAGATCTCCAGTTAATTTAATTTATATCCCGCCCCCCCC 3']. cDNA was cleaved with BamHI and XhoI. cDNA of size comprised longer than 7 kb was selected before cloning. Vector: a modified plasmidscript KS(+) after bulk excision from Lambda FLC I...Cloning sites, 5' end: SalI; 3' end: BamHI. Host: DH10B.

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Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00	
Total Percent Similarity:	64.29	Total Percent Identity:	50.00	
Gaps:	0			

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Sequence documentation:

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DEFINITION	Mus musculus 15 days embryo male testis cDNA, RIKEN full-length enriched library, clone:8030431G04 product:beta-site APP cleaving enzyme, full insert sequence.				
ACCESSION	AK031112				
VERSION	AK031112.1	GI:26328834			
KEYWORDS	HTC; CAP trapper.				
SOURCE	Mus musculus (house mouse)				
ORGANISM	Mus musculus				
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.				
AUTHORS	Carninci, P. and Hayashizaki, Y.				
TITLE	High-efficiency full-length cDNA cloning				
JOURNAL	Meth. Enzymol. 303, 19-44 (1999)				
MEDLINE	99279253				
PUBMED	10349636				
REFERENCE	Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,				
AUTHORS					

Itch,M., Komno,H., Okazaki,Y., Muramatsu,M. and Hayaishizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes
Genome Res. 10 (10), 1617-1630 (2000)
20499374
PUBMED
11042159

3
Shibata,K., Itch,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P.,
Komno,H., Akiyama,J., Nishi,K., Kitsuana,T., Tashiro,H., Itch,M.,
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Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K.,
Fujiwaka,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watanabe,M.,
Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsura,S., Kawai,J.,
Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayaishizaki,Y.
RIKEN integrated sequence analysis (RISA) system--384-format
sequencing pipeline with 384 multicapillary sequencer
Genome Res. 10 (11), 1757-1771 (2000)
20530913
JOURNAL
MEDLINE
PUBMED
11076861

4
The RIKEN Genome Exploration Research Group Phase II Team and the
FANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)
5
The FANTOM Consortium and the RIKEN Genome Exploration Research
Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation
of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
6 (bases 1 to 3877)
Adachi,J., Aizawa,K., Akimura,T., Arikawa,T., Bono,H., Carninci,P.,
Fukuda,S., Furuno,M., Hanagaki,T., Hara,A., Hashizume,M.,
Hayaishida,K., Hayatsu,N., Hiramoto,K., Hirooka,T., Hirozane,T.,
Hori,F., Imocani,K., Ishii,Y., Itch,M., Kagawa,I., Kasukawa,T.,
Kawai,H., Kawai,J., Kojima,Y., Kondo,S., Komno,H., Kouda,M.,
Koyama,S., Kurihara,C., Matsuyama,T., Miyazaki,A., Murata,M.,
Nakamura,M., Nishi,K., Nomura,K., Numazaki,R., Ohno,M., Ohsato,N.,
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Sogabe,Y., Tagami,M., Tagawa,A., Takahashi,F., Takaku-Akahira,S.,
Takeda,Y., Tanaka,T., Tomaru,Y., Toya,T., Yasunishi,A.,
Muramatsu,M. and Hayaishizaki,Y.
Direct Submission
Submitted (16-JUL-2001) Yoshihide Hayaishizaki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),
RIKEN Yokohama Institute, 1-7-22 Suehito-cho, Tsurumi-ku, Yokohama,
Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp,
URL: http://genome.gsc.riken.jp/, Tel:81-45-503-9222,
Fax:81-45-503-9216)
cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues.
Please visit our web site for further details.
URL: http://genome.gsc.riken.jp/
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Matching length: 33.00
Total length: 19.4
Matching Percent Similarity: 64.29
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Total Percent Identity: 50.00
Gaps: 0

Alignment:
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Sequence name: rtp2ndb:AK080498

Sequence documentation:
LOCUS AK080498 3880 bp mRNA linear HTC 03-APR-2004
DEFINITION Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-length
enriched library, clone:A730059K08 product:beta-site APP cleaving
enzyme, full insert sequence.
ACCESSION AK080498.1 GI:26099278
VERSION AK080498.1 GI:26099278
KEYWORDS HTC; Cap trapper.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE
1 Carninci,P. and Hayaishizaki,Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
2
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K.,
Itch,M., Komno,H., Okazaki,Y., Muramatsu,M. and Hayaishizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes
Genome Res. 10 (10), 1617-1630 (2000)
20499374
JOURNAL
MEDLINE
PUBMED
11042159

3
Shibata,K., Itch,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P.,
Komno,H., Akiyama,J., Nishi,K., Kitsuana,T., Tashiro,H., Itch,M.,
Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A.,
Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K.,
Fujiwaka,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watanabe,M.,
Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsura,S., Kawai,J.,
Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayaishizaki,Y.
RIKEN integrated sequence analysis (RISA) system--384-format
sequencing pipeline with 384 multicapillary sequencer
Genome Res. 10 (11), 1757-1771 (2000)
20530913
JOURNAL
MEDLINE
PUBMED
11076861

REFERENCE

AUTHORS 4 The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.

TITLE Functional annotation of a full-length mouse cDNA collection

REFERENCE Nature 409, 685-690 (2001)

AUTHORS 5

The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

Nature 420, 563-573 (2002)

6 (bases 1 to 3880)

JOURNAL Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Hayashida, S., Furuno, M., Hanagaki, T., Hara, A., Hashitume, W., Hayashida, K., Hayatsu, N., Hizimoto, K., Hirooka, T., Hirozane, T., Horii, F., Imocani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Niehi, K., Nomura, K., Numasaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saio, R., Saitoh, H., Sakai, C., Sakai, K., Sakazune, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tanaka, Y., Tanaka, T., Tomaru, A., Toy, T., Yasunishi, A., Yamada, Y., M. and Hayashizaki, Y.

TITLE Direct Submission

JOURNAL Submitted (16-Apr-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail: genome-res@gsc.riken.jp, URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216)

COMMENT cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken Division of Experimental Animal Research in Riken contributed to prepare mouse cDNAs.

Please visit our web site for further details.

URL: http://genome.gsc.riken.jp/
URL: http://fantom.gsc.riken.jp/.
Location/Qualifiers

FEATURES

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KEYWORDS	HTC, CAP trapper.				
SOURCE	Mus musculus (house mouse)				
ORGANISM	Mus musculus				
REFERENCE	Ennaji, Ota, Matsuo, Chordata; Craniata; Vertebrata; Euteleostomi; Eumalia; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus.				
AUTHORS	Carninci, P. and Hayashizaki, Y.				
TITLE	High-efficiency full-length cDNA cloning				
JOURNAL	Meth. Enzymol. 303, 19-44 (1999)				
MEDLINE	99279253				
PUBMED	10349636				
REFERENCE	2				
AUTHORS	Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.				
TITLE	Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes				
JOURNAL	Genome Res. 10 (10), 1617-1630 (2000)				
MEDLINE	20499374				
PUBMED	11042159				
REFERENCE	3				
AUTHORS	Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Kono, H., Akiyama, D., Nishi, K., Kitunai, T., Tashiro, H., Itoh, M., Suni, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsunoto, H., Sataoguchi, S., Ikegami, T., Kaishiwagi, K., Fujitake, S., Inoue, K., Togawa, Y., Irawa, M., Ohara, E., Matsubiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kita, A. and Hayashizaki, Y.				
TITLE	RIKEN integrated sequence analysis (RISA) system-384-format				
JOURNAL	sequencing pipeline with 384 multichipillary sequencer				
MEDLINE	Genome Res. 10 (11), 1757-1771 (2000)				
PUBMED	20530913				
REFERENCE	4				
AUTHORS	The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.				
TITLE	Functional annotation of a full-length mouse cDNA collection				
JOURNAL	Nature 409, 685-690 (2001)				
MEDLINE	5				
REFERENCE	The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.				
AUTHORS	Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs				
TITLE	Nature 420, 563-573 (2002)				
JOURNAL	6 (bases 1 to 4048)				
MEDLINE	Adachi, J., Aizawa, K., Akinura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hirooka, T., Hisozane, T., Hori, F., Imocani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Kato, S., Kawai, J., Kojima, Y., Kondo, S., Kono, H., Kouda, M., Koyu, S., Kuribara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, N., Ohnoco, N., Okazaki, Y., Saito, R., Saitoh, K., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Saeki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akai, S., Tanabe, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.				
REFERENCE	Direct Submission				
AUTHORS	Submitted (16-APR-2002) Yoshihide Hayashizaki. The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Kanagawa 230-0045, Japan (E-mail: yoshihide-gsc@riken.jp, URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216)				
TITLE	CDNA library was prepared and sequenced in Mouse Genome				
JOURNAL					
COMMENT					

Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues.

Please visit our web site for further details.
URL: <http://genome.gsc.riken.jp/>
URL: <http://fantom.gsc.riken.jp/>.

FEATURES

source

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CDS

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Alignment segment 1/1: (-)
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Matching Percent: 64.29 Matching Percent Identity: 50.00
Total Percent Similarity: 64.29 Total Percent Identity: 50.00
Gaps: 0
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Alignment:

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Sequence name: rscp2ndb:AK046175

Sequence documentation:

LOCUS AK046175 4101 bp mRNA linear HTC 03-APR-2004
DEFINITION Mus musculus adult male corpora quadrigemina cDNA, RIKEN
full-length enriched library, clone:B230346M13 product:beta-site
APP cleaving enzyme, full insert sequence.

ACCESSION AK046175
VERSION AK046175.1 GI:26337868
KEYWORDS HTC; CAP trapper.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus

REFERENCE
AUTHORS Carninci, P. and Hayashizaki, Y.
TITLE High-efficiency full-length cDNA cloning
JOURNAL Meth. Enzymol. 303, 19-44 (1999)
MEDLINE 99279253
PUBMED 10349636
REFERENCE 2

AUTHORS

Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,
Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes
Genome Res. 10 (10), 1617-1630 (2000)
20499374
JOURNAL MEDLINE
PUBMED 11042159
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AUTHORS

Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,
Konno, H., Akiyama, J., Nishi, K., Katsunari, T., Tashiro, H., Itoh, M.,
Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A.,
Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K.,
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Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J.,
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RIKEN integrated sequence analysis (RISA) system -384-format
sequencing pipeline with 384 multichannel sequencer
Genome Res. 10 (11), 1757-1771 (2000)
20530913
JOURNAL MEDLINE
PUBMED 11076861
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AUTHORS

The RIKEN Genome Exploration Research Group Phase II Team and the
PANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)
5
The PANTOM Consortium and the RIKEN Genome Exploration Research
Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation
of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
6 (bases 1 to 4101)

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AUTHORS

Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P.,
Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W.,
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Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,
Kato, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Konda, M.,
Koya, S., Kuribara, C., Matsuyama, T., Miyazaki, A., Murata, M.,
Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, K., Ohsato, N.,
Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,
Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,
Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,
Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,
Muramatsu, M. and Hayashizaki, Y.
Direct Submission

REFERENCES

AUTHORS

Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
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URL: <http://genome.gsc.riken.jp/>, Tel: 81-45-503-9222,
Fax: 81-45-503-9216)

REFERENCES

AUTHORS

cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues.
Please visit our web site for further details.
URL: <http://genome.gsc.riken.jp/>
URL: <http://fantom.gsc.riken.jp/>.

REFERENCES

AUTHORS

FEATURES

source

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Alignment segment 1/1: (-)

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Matching length:	14	Total length:	14
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Gaps:	0		

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Sequence name: rsetp2ndb:AY417360

Sequence documentation:

LOCUS AY417360 1506 bp DNA linear GSS 17-DEC-2003
DEFINITION Homo sapiens BACE gene, VIRUAL TRANSCRIPT, partial sequence,
genomic survey sequence.

ACCESSION AY417360

VERSION AY417360.1 GI:39773320

KEYWORDS GSS.

SOURCE Homo sapiens (human)

ORGANISM

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 (bases 1 to 1506)

Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejarival,A.,
Todd,M.A., Tanenbaum,D.M., Civejlo,D.R., Lu,F., Murphy,B.,
Fertiera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,
Adams,M.D. and Cargill,M.

Adams,M.D. and Cargill,M.

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Miyazaki, A., Murata, M., Nakamura, M., Nomura, K., Numazaki, R., Ohno, M., Sakai, K., Sakazume, N., Sasaki, D., Sato, K., Shibata, K., Shiraki, T., Tagami, M., Waki, K., Wataniki, A., Muramatsu, M., and Hayashizaki, Y. Direct Submission Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
 Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
 RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
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 cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.
 Please visit our web site (<http://genome.gsc.riken.go.jp>) for further details.

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Location/Qualifiers

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   (dev_stage=adult,tissue_type=liver,sex=male),
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Alignment of: us-10-726-967a-1 x BY103030 ..

Alignment segment 1/1: (+)

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Sequence name: ret2pndb:BY080676

Sequence documentation:

LOCUS BY080676 365 bp mRNA linear EST 07-DEC-2002
 DEFINITION BY080676 RIKEN full-length enriched, 16 days embryo whole body Mus
 musculus cDNA clone K630026J04 5', mRNA sequence.
 ACCESSION BY080676
 VERSION BY080676.1 GI:26191219

KEYWORDS EST.

SOURCE

ORGANISM

Mus musculus (house mouse)

Mus musculus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE

1 (bases 1 to 365)
 AUTHORS
 Okazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S.,
 Nkaido, I., Otsu, N., Saito, R., Suuki, H., Yamazaki, I.,
 Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A.,
 Schombach, C., Gojodori, T., Balderelli, R., Hill, D.P., Bull, C.,
 Hume, D.A., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H.,
 Batalov, S., Beisel, K.W., Blake, J.A., Brad, D., Brusic, V.,
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 Gustincich, S., Hirokawa, N., Jackson, I.J., Jarvis, E.D., Kanai, A.,
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 Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P.,
 Hayatsu, N., Hirozane-Kishikawa, T., Kono, H., Nakamura, M.,
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 Akakawa, T., Fukuda, S., Hara, A., Hashitume, W., Imotani, K., Ishii, Y.,
 Itoh, M., Kagawa, I., Miyazaki, A., Sakai, K., Sasaki, D., Shibata, K.,
 Shingawa, A., Yasunishi, A., Yoshino, M., Waterson, R., Lander, E.S.,
 Rogers, J., Birney, E. and Hayashizaki, Y.

TITLE

Analysis of the mouse transcriptome based on functional annotation
 of 60,770 full-length cDNAs

JOURNAL

MEDLINE

22354683

PUBMED

12466851

COMMENT

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 Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S.,
 Hirozane, T., Imotani, K., Ishii, Y., Itoh, M., Kawai, J., Kono, H.,
 Miyazaki, A., Murata, M., Nakamura, M., Nomura, K., Numazaki, R.,
 Ohno, M., Sakai, K., Sakazume, N., Sasaki, D., Sato, K., Shibata, K.,
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 nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)
 cDNA library was prepared and sequenced in Mouse Genome
 Encyclopedia Project of Genome Exploration Research Group in Riken
 Genomic Sciences Center and Genome Science Laboratory in Riken.
 Division of Experimental Animal Research in Riken contributed to
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 Please visit our web site (<http://genome.gsc.riken.go.jp>) for
 further details.

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source

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1. 365
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LOCUS BY103030 346 bp mRNA linear EST 07-DEC-2002
 DEFINITION BY103030 RIKEN full-length enriched, pooled tissues, adult spleen,
 etc. Mus musculus cDNA clone K630148P20 5', mRNA sequence.

ACCESSION BY103030
 BY103030.1 GI:26213647

VERSION EST.

KEYWORDS Mus musculus (house mouse)

SOURCE

ORGANISM

REFERENCE
 AUTHORS

1 (bases 1 to 346)
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 Okazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S.,
 Nikaido, I., Oshino, N., Saito, R., Suzuki, H., Yamana, T.,
 Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A.,
 Schombach, C., Gotohori, T., Baldarelli, R., Hill, D. P., Bult, C.,
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 Wells, C., Wilming, L. G., Wynshaw-Boris, A., Yanagisawa, M., Yang, I.,
 Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P.,
 Hayatsu, N., Hirozane-Kishikawa, T., Kono, H., Nakamura, M.,
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 Arakawa, T., Fukuda, S., Hara, A., Hashizume, W., Imotani, K., Ishii, Y.,
 Itoh, M., Kagawa, I., Miyazaki, A., Sakai, K., Sasaki, D., Shibata, K.,
 Shinagawa, A., Yasunishi, A., Yoshino, M., Waterston, R., Lander, E. S.,
 Rogers, J., Birney, E. and Hayashizaki, Y.

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COMMENT
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The Institute of Physical and Chemical Research (RIKEN)
 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
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Email: genome-res@gsr.riken.jp, URL: http://genome.gsc.riken.jp/
 Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S.,
 Hirozane, T., Imotani, K., Ishii, Y., Itoh, M., Kawai, J., Kono, H.,
 Miyazaki, A., Murata, M., Nakamura, M., Nomura, K., Numazaki, R.,
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 prepare mouse tissues.
 Please visit our web site (http://genome.gsc.riken.go.jp) for
 further details.

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Location/Qualifiers
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 body, sex=mx), (dev_stage=16 days embryo, tissue_type=whole
 body, sex=mx), (dev_stage=17 days embryo, tissue_type=whole
 body, sex=mx), (dev_stage=15 days pregnant,
 adult, tissue_type=amion, sex=female), (dev_stage=10 days
 neonate, tissue_type=brain, sex=mx), (dev_stage=10 days
 neonate, tissue_type=thymus, sex=mx), (dev_stage=10 days
 neonate, tissue_type=heart, sex=mx)"

Alignment of: us-10-726-967a-1 x BY103030 ..

Alignment segment 1/1: (-)

Matching	Quality:	27.00	Score:	10.3
Percent Similarity:	87.50	Total length:	8	
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31 ArgSerg1yLeng1yG1yAlaPro
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192 AGGAAAGGGTGTGGGCGAGCCGCC

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Sequence name: rsep2ndb:BY080676

Sequence documentation: 365 bp mRNA linear EST 07-DEC-2002

LOCUS BY080676 365 bp mRNA linear EST 07-DEC-2002

DEFINITION BY080676 RIKEN full-length enriched, 16 days embryo whole body Mus musculus cDNA clone K630026J04.5, mRNA sequence.

ACCESSION BY080676

VERSION BY080676.1 GI:26191219

KEYWORDS EST.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

REFERENCE Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 365)

AUTHORS Okazaki, Y., Furuno, M., Kanukawa, T., Adachi, J., Bono, H., Kondo, S., Mikado, I., Osato, N., Saito, R., Suzuki, H., Yamana, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schombach, C., Gajobori, T., Baldarelli, R., Hill, D. P., Bult, C., Hume, D. A., Quackenbush, J., Schriml, L. M., Kanapin, A., Matsuda, H., Batalov, S., Beisels, K. W., Blake, J. A., Bradt, D., Bruscia, V., Chochia, C., Corbani, L. E., Cousins, S., Dalla, E., Dragani, T. A., Fletcher, C. F., Forrest, A., Frazer, K. S., Gaasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I. J., Jarvis, E. D., Kanai, A., Kawaji, H., Kawasawa, Y., Kedzierski, R. M., King, B. L., Konagaya, A., Kurochkin, I. V., Lee, Y., Lenhard, B., Lyons, P. A., Maglott, D. R., Malais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W. J., Portea, G., Pesole, G., Petrovsky, N., Pillai, R., Pontius, J. U., Qi, D., Ramchandran, S., Ravaei, T., Reed, J. C., Reed, D. J., Reid, J., Ring, B. Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C. A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M. S., Teasdale, R. D., Tomlita, M., Verardo, R., Wagner, L., Wahlstedt, C., Wang, Y., Watanabe, Y., Wells, C., Wilming, L. G., Wysshaw-Boris, A., Yangisawa, M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P., Hayatsu, N., Hirozane-Kishikawa, T., Komori, H., Nakamura, M., Sakazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Aizawa, K., Arakawa, T., Fukuda, S., Hara, A., Hashizume, W., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Miyazaki, A., Sakai, K., Sasaki, D., Shibata, K., Shingawa, A., Yasunishi, A., Yoshino, M., Waterston, R., Lander, E. S., Rogers, J., Birney, E. and Hayashizaki, Y.

TITLE Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

JOURNAL Nature 420, 563-573 (2002)

MEDLINE 22354683

PUBMED 12466851

COMMENT Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9222
Fax: 81-45-503-9216
Email: genome-res@sc.riken.jp, URL: http://genome.gsc.riken.jp/
Aizawa, K., Akimura, T., Arikawa, T., Carninci, P., Fukuda, S., Hirozane, T., Imotani, K., Ishii, Y., Itoh, M., Kawai, J., Komori, H., Miyazaki, A., Murata, M., Nakamura, M., Nomura, K., Numazawa, K., Ohno, M., Sakai, K., Sakazume, N., Sasaki, D., Sato, K., Shiraki, T., Shiraki, T., Tagami, M., Waki, K., Watanabe, A., Muramatsu, M. and Hayashizaki, Y. Direct Submission
Computational Analysis of Full-length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)
cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
Division of Experimental Animal Research in Riken contributed to

prepare mouse tissues.
Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
Location/Qualifiers
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/strain="C57BL/6J"
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/clone="K630026J04"
/tissue_type="whole body"
/dev_stage="16 days embryo"
/clone_lib="RIKEN full-length enriched, 16 days embryo whole body"

Alignment of: us-10-726-967a-1 x BY080676 ..

Alignment segment 1/1: (-)

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Matching length:	8		Total length:	8
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50
Total Percent Similarity:	87.50		Total Percent Identity:	62.50
Gaps:	0			

Alignment:

31 Argsergilyleuglyglyalalpro 38
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192 AGGAAAGGATGTGGGCGAGCCCC 169

Sequence name: r2p2ndb:AY417362

Sequence documentation: 1506 bp DNA linear GSS 17-DEC-2003

LOCUS AY417362 1506 bp DNA linear GSS 17-DEC-2003

DEFINITION Mus musculus BACE gene, VIRUAL TRANSCRIPT, partial sequence, genomic survey sequence.

ACCESSION AY417362

VERSION AY417362.1 GI:39773322

KEYWORDS GSS.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

REFERENCE Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 1506)

AUTHORS Clark, A. G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M. A., Tanbaum, D. M., Civeello, D. R., Lu, F., Murphy, B., Ferreira, S., Wang, G., Zheng, X. H., White, T. J., Sinsky, D. J., Adams, M. D. and Cargill, M.

TITLE Inferring nonneutral evolution from human-chimp-mouse orthologous gene trios

JOURNAL Science 302 (5652), 1960-1963 (2003)

PUBMED 14671302

REFERENCE 2 (bases 1 to 1506)

AUTHORS Clark, A. G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M. A., Tanbaum, D. M., Civeello, D. R., Lu, F., Murphy, B., Ferreira, S., Wang, G., Zheng, X. H., White, T. J., Sinsky, D. J., Adams, M. D. and Cargill, M.

TITLE Direct Submission

JOURNAL Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA

COMMENT This sequence was made by sequencing genomic exons and ordering them based on alignment.

FEATURES
location/Qualifiers
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Alignment of: us-10-726-967a-1 x AY417362 ..

Alignment segment 1/1: (-)

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Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
:::	:::	
326	ACGAAAGGCTGTGGGCGACGCCCC	303

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: August 3, 2005, 11:48:45 ; Search time 1 Seconds
(without alignments)
1.665 Million cell updates/sec

Title: us-10-726-967a-1
Perfect score: 104
Sequence: 1 TQGHRLPLRSGLGAPLGL 20

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 180 seqs, 83237 residues

Total number of hits satisfying chosen parameters: 180

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 500 summaries

Database : ragdb:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	104	100.0	425 1	Beta-secretase zym
2	104	100.0	428 1	Human aspartyl pro
3	104	100.0	428 1	Human-Asp-2(b) pro
4	104	100.0	428 1	Human-Asp2(b) delc
5	104	100.0	428 1	Human aspartyl pro
6	104	100.0	428 1	Human-pro-Asp-2(b)
7	104	100.0	428 1	Human Asp-2(b) delc
8	104	100.0	428 1	Human-pro-Asp-2(b)
9	104	100.0	428 1	Human Asp2(b) delc
10	104	100.0	428 1	Human Asp2(b) delc
11	104	100.0	432 1	Mature BACE P33K a
12	104	100.0	433 1	Human-pro-Asp-2(a)
13	104	100.0	433 1	T7-human aspartyl
14	104	100.0	433 1	Human-pro-Asp-2(a)
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35	104	100.0	439 1	Human BACE1 mutant
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84	104	100.0	460 1	Amino acid sequenc
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ALIGNMENTS

RESULT 1
ADCB1580 standard; protein; 425 AA.

ADCB1580;

01-JAN-2004 (first entry)

Beta-secretase zymogen (pbsz) amino acid sequence SEQ ID NO:3.

human; BACE; modification; Pro33lys; pro-enzyme.

Unidentified.

MO2003072733-A2.

04-SEP-2003.

21-FEB-2003; 2003MO-US005508.

21-FEB-2002; 2002US-0358651P.

(PHAA) PHARMACIA & UPJOHN CO.

Chou K, Howe JM;

WPI; 2003-712719/67.

BACE polypeptides having Pro33lys modification, useful in determining possible mutations, which will inhibit enzyme activity, and in determining potential active site for target molecules.

Disclosure; Fig 3; 38pp; English.

The present invention describes an isolated polypeptide (I) comprising or consisting of a fully defined sequence of 432 amino acids (see ADCB1561), and comprising human BACE having the modification Pro33lys. Also described: (1) a composition comprising an active human BACE enzyme comprising the pro-enzyme sequence of BACE having the modification Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding (I); (3) an isolated polynucleotide consisting of (2), or a nucleotide 70-1365 of a 1355-bp sequence (see ADCB1562); (4) an expression vector comprising the polynucleotide of (2), or a polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the expression vector can produce the Pro33lys-BACE polypeptide when present in a compatible host cell, when cultured under conditions that allow production; (5) a recombinant host cell comprising the expression vector; and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE polypeptide having Pro33lys modification may be used in determining possible mutations, which will inhibit enzyme activity, and in determining potential active site for target molecules. The vector comprising the BACE polynucleotide is useful for producing recombinant BACE polypeptides having Pro33lys modification. The present sequence represents a beta-secretase zymogen amino acid sequence, which is used in the exemplification of the present invention.

Sequence 425 AA;

Query Match 100.0%; Score 104; DB 1; Length 425;
Best Local Similarity 100.0%; Pred. No.33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSSGAGAPLGL 41
DB 1 TQHGIRLPRLSSGAGAPLGL 20

```
RESULT 2
AAU07219
ID AAU07219 standard; protein, 428 AA.
XX
AC AAU07219;
XX
DT 24-OCT-2001 (first entry)
XX
DE Human aspartyl protease 2b deltatm (HuAsp-2bdeltatm).
XX
KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
KW aspartyl protease 2; Asp2; amyloid protein precursor; App;
KW beta-secretase; Alzheimer's disease; Hubap-2bdeltatm.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
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FT Misc-difference 2 /note= "Encoded by NNC"
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XX
PF 09-MAY-2001; 2001WO-IB000797.
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PR 09-MAY-2001; 2001WO-IB000797.
XX
PA (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
DR WPI; 2001-502548/55.
DR N-PSDB; AAS11732.
XX
XX
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX
XX Claim 149; Page 167-168; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (App)
```

```
CC comprising the amino acid sequence of a App or its fragment containing an
CC App cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian App or App fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the App processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC ; and for reducing cellular production of amyloid beta (Abeta) from App.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (Abeta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from App nucleic acid sequences are useful for detecting Hu-App
CC nucleic acids in in vitro assays and in Northern and Southern blots. The
CC present sequence represents the amino acid sequence of human Asp-2b delta
CC TM construct which lacks the transmembrane domain. This construct was
CC used for bacterial expression and purification of human Asp2b
XX
SQ Sequence 428 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41
XX
RESULT 3
AAE10646
ID AAE10646 standard; protein, 428 AA.
XX
AC AAE10646;
XX
DT 10-DEC-2001 (first entry)
XX
DE Human-Asp 2(b) protein lacking transmembrane domain.
XX
KW Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; App;
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective.
XX
OS Homo sapiens.
OS Synthetic.
XX
XX GB2357767-A.
XX
PN 04-JUL-2001.
XX
PD 22-SEP-2000; 2000GB-00023315.
XX
PF 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00415901.
PR 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Bienkowski MJ, Gurney M;
XX
DR WPI; 2001-444208/48.
DR N-PSDB; AAD17895.
XX
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 10; Page 138-139; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (Hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
```

CC cytoplasmic domain and retains alpha-secretase activity and amyloid
 CC protein precursor (APP) processing activity. The proteins of the
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
 CC are useful for treating Alzheimer's disease (AD) which causes progressive
 CC dementia with consequent formation of amyloid plaques, neurofibrillary
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
 CC with the substrate under acidic conditions and determining the level of
 CC hu-Asp1 proteolytic activity. The present sequence is human Asp 2(b)
 CC protein lacking a transmembrane (TM) domain. This sequence is generated
 CC by the deletion of the C-terminal TM domain and intracellular domains of
 CC human Asp 2(b) protein

SO Sequence 428 AA;

Query Match 100.0%; Score 104; DB 1; Length 428;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGIGCAPLGL 41
 Db 22 TQHGIRLPURSGIGCAPLGL 41

RESULT 4
 AAE06891
 ID AAE06891 standard; protein; 428 AA.
 AC AAE06891;
 XX
 DT 23-OCT-2001 (first entry)
 XX
 DE Human-Asp2(b) deltaTM protein.
 XX
 KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
 KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
 KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
 KW neuroprotective; antisense therapy; Asp2(b) deltaTM protein;
 KW gene therapy.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN WO200150829-A2.
 XX
 PD 19-JUL-2001.
 XX
 PF 09-MAY-2001; 2001WO-IB000799.
 XX
 PR 09-MAY-2001; 2001WO-IB000799.
 XX
 PA (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (BARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX
 DR WPI; 2001-483072/52.
 DR N-PSDB; AAD13276.
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Claim 149; Page 167-168; 185pp; English.
 CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.

CC Human aspartyl proteases can act as beta-secretase proteases useful for
 CC treating Alzheimer's disease. APP isoforms are useful for identifying
 CC modulators of amyloid-beta peptide production, for use in designing
 CC therapeutics for the treatment and prevention of Alzheimer's disease,
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
 CC and neuronal loss. APP isoforms are also used in methods for identifying
 CC inhibitors and modulators of human Asp2 activity. The invention relates
 CC to a method for identifying agents that modulate the activity of human
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
 CC as a means to screen in cellular assays for the inhibitors of beta- and
 CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
 CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
 CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
 CC The present sequence is Human aspartyl protease 2b (Hu-Asp2b) deltaTM
 CC protein which is obtained by the deletion of C-terminal transmembrane and
 CC intracellular domains of Hu-Asp2b. Human Asp2b has beta-secretase
 CC activity

SO Sequence 428 AA;

Query Match 100.0%; Score 104; DB 1; Length 428;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGIGCAPLGL 41
 Db 22 TQHGIRLPURSGIGCAPLGL 41

RESULT 5
 AAE02598
 ID AAE02598 standard; protein; 428 AA.
 AC AAE02598;
 XX
 DT 10-AUG-2001 (first entry)
 XX
 DE Human aspartyl protease 2 (b) delta TM protein.
 XX
 KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
 KW Alzheimer's disease; antialzheimer's; aspartyl protease 2; Asp 2;
 KW beta-secretase; chromosome 11q23.3-24.1; mutant; mutcin.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN WO200123533-A2.
 XX
 PD 05-APR-2001.
 XX
 PF 22-SEP-2000; 2000WO-US026080.
 XX
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 XX
 PA (PHNA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney M, Bienkowski MJ;
 XX
 DR WPI; 2001-290516/30.
 DR N-PSDB; AAD06768.
 XX
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
 PT protein, useful for the treatment of Alzheimer's disease.
 XX
 PS Example 10; Page 166-167; 189pp; English.
 CC The present invention relates to enzymes for cleaving the alpha-
 CC secretase site of the amyloid precursor protein (APP) and methods of
 CC identifying those enzymes. The methods may be used to identify enzymes
 CC that may be used to cleave the alpha-secretase cleavage site of the APP

CC protein. The enzymes may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is human aspartyl protease 2
 CC (Asp 2) (b) delta TM protein. The Asp 2 gene is located on chromosome
 CC 11q23.3-24.1. The Asp 2 has beta-secretase protease activity
 XX
 SQ Sequence 428 AA;

Query Match 100.0%; Score 104; DB 1; Length 428;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41
 DB 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 6
 AAU06620
 ID AAU06620 standard; protein; 428 AA.

AC AAU06620;

DT 24-OCT-2001 (first entry)

XX Human-pro-Asp 2(b) delta TM.

XX Human; Aspartyl protease; beta-secretase; nootropic; Asp2;
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KM amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM; mutant; mutant.

OS Homo sapiens.

XX Synthetic.

PN WO200149098-A2.

PD 12-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000798.

PR 09-MAY-2001; 2001WO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2001-502549/55.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 activity.

PS Claim 149; Page 167-168; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl termini of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing

CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NIDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence is Human-pro-Asp 2(b) delta TM
 CC protein, which lacks the C-terminal transmembrane domain
 XX
 SQ Sequence 428 AA;

Query Match 100.0%; Score 104; DB 1; Length 428;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41
 DB 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 7
 ABB78607
 ID ABB78607 standard; protein; 428 AA.

AC ABB78607;

DT 16-JUN-2002 (first entry)

XX Human Asp-2(b) delta TM protein sequence SEQ ID NO:51.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
 KM Chromosome 11q23.3-24.1.

XX Homo sapiens.

PN GB2367060-A.

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155483P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Bienkowski MJ, Gurney M;

DR WPI; 2002-397167/43.

DR N-PSDB; ABL52487.

XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

PS Example 10; Page 138-139; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridizes under stringent conditions to the non-
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that

hybridises under stringent conditions to (iii) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see AB078583)) (4) a vector (iv) comprising (iii) or (iii') and (5) a host cell (v) transformed or transfected with (iii), (iii') and/or (iv). The hu-Asp1 protease substrate (i) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (ii) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence represents human Asp-2(b)deltaTM, which is given in an example from the present invention

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
22 TOHGIRLPRLRSGLGAPLGL 41
22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 8
ADJ94363 ID ADJ94363 standard; protein; 428 AA.
AC ADJ94363;
XX
XX
XX 03-JUN-2004 (first entry)
DT
XX
XX Human-pro-Asp-2(b)deltaTM.
DE
XX
XX Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
KW neurotrophic; neuroprotective; amyloid beta; mutant; mutein.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX US6706485-B1.
PN
XX
XX 16-MAR-2004.
PD
XX
XX 12-APR-2000; 2000US-00548376.
PF
XX
XX 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
XX (PNUA) PHARMACIA & UPJOHN CO.
PA
XX
XX Gurney ME, Bienkowski MJ, Heinriksen RL, Parodi LA, Yan R;
PI WPI; 2004-236722/22.
XX
XX N-PSDB; ADJ94362.
DR
XX
XX Identifying agents that modulate activity of Asp2 aspartyl protease
PT useful for treating or preventing Alzheimer's disease involves comparing
PT APP processing activity of protease in presence and absence of test
XX agent.
XX
XX Example 10; SEQ ID NO 51; 109pp; English.
XX
XX The invention relates to identifying agents that modulate activity of
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
CC precursor protein (APP) in the presence and absence of a test agent,
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence

of the test agent, and comparing the activities to identify agents that modulate the activity of Asp2. Also disclosed are the cDNA and proteins for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising the vector and the method of producing Hu-Asp polypeptide, an isolated antibody that specifically binds to Hu-Asp polypeptide, identifying a cell that can be used to screen for inhibitors of beta secretase activity, novel isoforms of amyloid protein precursor (APP), where the last 2 carboxy terminus amino acids of that isoform are both lysine residues (e.g. those designated APP695-KK or carrying the Swedish mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful for assaying for beta secretase activity and screening for inhibitors of beta-secretase) and polynucleotides that encode the APP proteins. The method is useful for identifying agents that modulate the activity (amyloid precursor protein processing activity) of Asp2 aspartyl protease. Preferably, the method is useful for identifying agents that inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid precursor protein processing, are useful for treating or preventing Alzheimer's disease. The present sequence represents an aspartyl protease mutant construct (e.g. lacking a transmembrane domain and/or including a caspase cleavage site) used to investigate the cleavage activity of Asp2 proteins.

Sequence 428 AA;

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 9
ADJ050459 ID ADJ050459 standard; protein; 428 AA.
AC ADJ050459;
XX
XX 29-JUL-2004 (first entry)
DT
XX
XX Human Asp2(b)deltaTM mutant protein.
DE
XX
XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; mutant; mutein.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX US6737510-B1.
PN
XX
XX 18-MAY-2004.
PD
XX
XX 12-APR-2000; 2000US-00548373.
PF
XX
XX 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
XX (PNUA) PHARMACIA & UPJOHN CO.
PA
XX
XX Gurney ME, Bienkowski MJ, Heinriksen RL, Parodi LA, Yan R;
PI WPI; 2004-387112/36.
XX
XX N-PSDB; ADJ050458.
DR
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DNG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's

PT disease.
 XX
 PS Example 10; SEQ ID NO 51; 108bp; English.
 CC The invention relates to a method for identifying an agent that decreases
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase
 CC cleavage site of the amyloid precursor protein (APP). The invention is
 CC useful in preparing a composition for treating or preventing Alzheimer's
 CC disease. It is also useful in gene therapy. The present sequence is human
 CC Asp2(b) mutant protein. This sequence is used to illustrate the method of
 CC the invention.
 XX
 SQ Sequence 428 AA;
 Query Match 100.0%; Score 104; DB 1; Length 428;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLRSGLGAGPLGL 41
 Db 22 TQHGIRLPRLRSGLGAGPLGL 41
 RESULT 10
 ID ADR75372 standard; protein; 428 AA.
 AC ADR75372;
 XX
 DT 18-NOV-2004 (first entry)
 XX
 DE Human Asp2(b) deltatm mutant protein.
 XX
 KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
 KM chromosome identification; Alzheimer's disease; human; mutant.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN US2004166507-A1.
 XX
 PD 26-AUG-2004.
 XX
 PF 29-AUG-2003; 2003US-00652045.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (GURN/) GURNEY M E.
 PA (BIEN/) BIENKOWAKI M J.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 PI Gurney ME, Bienkowaki MJ, Heinrikson RL, Parodi LA, Yan R;
 DR WPI; 2004-624916/60.
 DR N-PSDB; ADR75371.
 XX
 PT Novel purified/isolated polynucleotide encoding polypeptide having
 PT aspartyl protease activity involved in processing amyloid precursor
 PT protein into amyloid beta, useful in identifying agent decreasing
 PT activity of aspartyl protease.
 XX
 XX Example 10; SEQ ID NO 51; 107bp; English.
 CC The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (Asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that

CC decreases the protease activity of the Asp. Asp DNA is useful in
 CC chromosome identification as they can hybridise with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
 CC present sequence is the human Asp2(b) deltatm mutant protein. This
 CC sequence is used to illustrate the method of the invention.
 XX
 SQ Sequence 428 AA;
 Query Match 100.0%; Score 104; DB 1; Length 428;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLRSGLGAGPLGL 41
 Db 22 TQHGIRLPRLRSGLGAGPLGL 41
 RESULT 11
 ID ADC81561 standard; protein; 432 AA.
 AC ADC81561;
 XX
 DT 01-JAN-2004 (first entry)
 XX
 DE Mature BACE P33K amino acid sequence SEQ ID NO:2.
 XX
 KW human; BACE; modification; Pro33lys; pro-enzyme.
 XX
 OS Synthetic.
 OS Homo sapiens.
 XX
 PN WO2003072733-A2.
 XX
 PD 04-SEP-2003.
 XX
 PF 21-FEB-2003; 2003WO-US005508.
 XX
 PR 21-FEB-2002; 2002US-0358651P.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 PA Chou K, Howe JW;
 PI WPI; 2003-712719/67.
 DR N-PSDB; ADC81562.
 DR
 XX
 PT BACE polypeptides having Pro33lys modification, useful in determining
 PT possible mutations, which will inhibit enzyme activity, and in
 PT determining potential active site for target molecules.
 XX
 XX Claim 10; SEQ ID NO 2; 38pp; English.
 CC The present invention describes an isolated polypeptide (I) comprising or
 CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),
 CC and comprising human BACE having the modification Pro33lys. Also
 CC described: (1) a composition comprising an active human BACE enzyme
 CC comprising the pro-enzyme sequence of BACE having the modification
 CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding
 CC (1); (3) an isolated polynucleotide consisting or comprising of
 CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an
 CC expression vector comprising the polynucleotide of (2), or a
 CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
 CC expression vector can produce the Pro33lys-BACE polypeptide when present
 CC in a compatible host cell, when cultured under conditions that allow
 CC production; (5) a recombinant host cell comprising the expression vector;
 CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
 CC polypeptide having Pro33lys modification may be used in determining
 CC possible mutations, which will inhibit enzyme activity, and in

CC determining potential active site for target molecules. The vector
 CC comprising the BACE polynucleotide is useful for producing recombinant
 CC BACE polypeptides having Pro33ys modification. The present sequence
 CC represents the mature recombinant BACE p33k amino acid sequence used in
 CC the exemplification of the present invention.

XX Sequence 432 AA;

Query Match 100.0%; Score 104; DB 1; Length 432;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
 |||||
 DB 1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 12

AAV8433
 ID AAV8433 standard; protein; 433 AA.

XX AAV8433;

DT 12-SEP-2003 (revised)

DT 06-AUG-2003 (revised)

DT 03-AUG-2000 (first entry)

XX Human-pro-Asp-2(a)-deltatm amino acid sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
 KW Alzheimer's disease; beta secretase site; human-pro-Asp-2(a)-deltatm.

OS Homo sapiens.
 OS Enterobacteria phage T7.
 OS Chimeric.

PN MO200017369-A2.

XX 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2000-303209/26.

DR N-PSDB; AAA15670.

PT New enzyme designated human aspartase useful in research into Alzheimer's
 PT Disease is capable of cleaving amyloid protein precursor at the beta
 PT secretase site to produce amyloid beta peptide.

XX Example 9; Fig 8; 183pp; English.

XX This sequence represents a modified version of the human aspartase 2
 CC (Asp2) amino acid sequence. The sequence is used in the bacterial
 CC expression of human Asp2L. The invention relates to a protease (e.g.
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
 CC protein (APP). The protease contains a sequence encoding the amino acid
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
 CC amino acids. When mutated the APP gene causes an autosomal dominant form
 CC of Alzheimer's disease. APP localises to the cell surface membrane and
 CC have a single C-terminal transmembrane domain. Proteolytic processing of
 CC APP produces the amyloid beta protein, which is possibly very important
 CC in Alzheimer's disease. The invention includes a nucleotide sequence
 CC encoding the protease, a vector containing the nucleotide sequence
 CC and a cell line comprising the vector. Methods for screening for inhibitors of
 CC beta secretase activity are also given in the invention. The human
 CC aspartase protein and nucleotide sequences and the methods for
 CC identifying inhibitors of the protease, are useful in the treatment of

CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to
 CC correct OS field.) (Updated on 12-SEP-2003 to standardise OS field)
 XX
 XX Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
 |||||
 DB 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 13

AAU07213
 ID AAU07213 standard; protein; 433 AA.

XX AAU07213;

DT 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

XX T7-human aspartyl protease 2a deltatm (low GC).

XX Human; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;
 KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;
 KW beta-secretase; Alzheimer's disease.

OS Homo sapiens.
 OS Enterobacteria phage T7.

PN MO200149097-A2.

XX 12-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000797.

PR 09-MAY-2001; 2001WO-IB000797.

PA (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2001-502548/55.

DR N-PSDB; AAS11713.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.

XX Example 9; Fig 8; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognisable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl terminus of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
 CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease; for identifying modulators of amyloid-beta (Abeta)

CC peptide production, and for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from Asp nucleic acid sequences are useful for detecting hu-Asp
CC nucleic acids in in vitro assays and in Northern and Southern blots. The
CC present sequence represents the amino acid sequence of T7-human Asp-2a
CC delta TM (low GC) construct which has a T7 tag, has the GC content of the
CC 5' sequence reduced by site-directed mutagenesis, and lacks the
CC transmembrane domain. This construct was used for bacterial expression
CC and purification of human Asp2a. (Updated on 11-SEP-2003 to standardise
CC OS field)

XX SQ Sequence 433 AA;
XX

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 14
AAE10640
ID AAE10640 standard; protein; 433 AA.
XX
XX AAE10640;
XX
XX 10-DEC-2001 (first entry)
XX
XX Human-pro-Asp 2(a) protein lacking TM domain.
XX
XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX Amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;
XX Human-pro-Asp 2(a) protein.
XX
XX Homo sapiens.
XX OS Synthetic.
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99MO-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX PR 06-DEC-1999; 99US-0169232P.
XX
XX (PHMA) PHARMACIA & UPJOHN CO.
XX
XX PI Bienkowskij MJ, Gurney M;
XX WPI; 2001-444208/48.
XX DR N-PSDB; AAD17876.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 9; Fig 8; 187pp; English.

XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive

CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence human-pro-Asp 2(a)
CC protein lacking a transmembrane (TM) domain (low GC). This sequence is
CC generated from human Asp 2(a) protein by the deletion of its C-terminal
CC transmembrane domain and change of degenerate codon bases in 15 amino
CC acid positions from G/C to A/T to reduce the GC content

XX SQ Sequence 433 AA;
XX

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 15
AAE06870
ID AAE06870 standard; protein; 433 AA.
XX
XX AAE06870;
XX
XX 23-OCT-2001 (first entry)
XX
XX Human-pro-Asp2(a) deltaTM (low GC) protein.
XX
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotrophic;
XX neuroprotective; antisense therapy; pro-Asp2(a) deltaTM protein;
XX gene therapy.
XX
XX Homo sapiens.
XX OS Synthetic.
XX
XX WO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX PA (GURN/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX
XX PI Bienkowskij MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX DR N-PSDB; AAD13032.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 8; 185pp; English.

XX The invention relates to human aspartyl proteases (hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis

CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC APP nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present sequence is Human-pro-Asp2/ protease 2a (Asp2a) deltaTM
CC (low GC) protein which is obtained by the deletion of C-terminal
CC transmembrane domain and change of degenerate codons bases in 15 amino
CC acid positions from G/C to A/T in the Hu-Asp2a. Human Asp2a has beta-
CC secretase activity

SQ Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41
DB 2 TQHGIRLPKRSGLGAPLGL 21

RESULT 16
AAE02592
ID AAE02592 standard; protein; 433 AA.
XX
AC AAE02592;
XX
DT 10-AUG-2001 (first entry)
XX
DE Human-Pro-Asp-2(a) deltaTM protein.
XX
KM Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; Asp-2a delta TM.
OS Homo sapiens.
XX Synthetic.
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-2290516/30.
XX
XX N-PSDB; AAD06750.
XX
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 9; Page 155-156; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human Aspartyl protease 2a
XX (Asp-2a) deltaTM protein which is obtained by deleting the transmembrane
XX domain and adding a TY tag at the N-terminal end. This sequence has beta-

CC secretase protease activity. Note: The present sequence is also shown in
CC figure 8 of the specification, but lacks amino acid residues at its C-
CC terminal end

SQ Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41
DB 2 TQHGIRLPKRSGLGAPLGL 21

RESULT 17
AAU06614
ID AAU06614 standard; protein; 433 AA.
XX
AC AAU06614;
XX
DT 24-OCT-2001 (first entry)
XX
DE Human-pro-Asp 2(a) delta TM (low GC).
XX
KM Human; Aspartyl protease; beta-secretase; nontropic; Asp2;
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
XX amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM (low GC).
OS Homo sapiens.
XX Synthetic.
XX WO200149098-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI; 2001-502549/55.
XX
XX N-PSDB; AAS11528.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 8; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp2) protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the APP protein
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP)) comprising the amino acid sequence of amyloid
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-
XX beta (Abeta) peptide production. APP is also useful in designing

CC therapeutic for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-Sw-beta-secretase peptide sequence (NIDA), which is
CC associated with increased levels of Abeta processing is useful in assays
CC relating the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to APP
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting hu-APP nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence is Human-pro-APP 2(a) delta TM (low
CC GC), a synthetic version of APP 2(a) whose GC content has been altered to
CC facilitate expression in E.coli

XX Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;

Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
Db 2 TONGIRLPLRSGLGAPLGL 21

RESULT 18

AB878601 ABB78601 standard; protein; 433 AA.

XX AC ABB78601;

XX DT 16-JUL-2002 (first entry)

XX DE Human-pro-APP-2(a)deltaTM (low GC) protein sequence SEQ ID NO:26.

XX KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
XX amyloid precursor protein; APP.

XX OS Homo sapiens.

XX PN GB2367060-A.

XX PD 27-MAR-2002.

XX PF 29-OCT-2001; 2001GB-00025934.

XX PR 23-SEP-1999; 99US-00404133.

XX PR 23-SEP-1999; 99US-0155493P.

XX PR 23-SEP-1999; 99WO-US020881.

XX PR 13-OCT-1999; 99US-00416901.

XX PR 06-DEC-1999; 99US-0169232P.

XX PR 22-SEP-2000; 2000GB-00023315.

XX PA (PHAA) PHARMACIA & UPJOHN CO.

XX PI Bienkowski MJ, Gurney M;

XX DR WPI; 2002-397167/43.

XX PT N-PSDB; ABL52468.

XX XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
XX protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX PS Example 9; Fig 8; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
XX substrate (I) which comprises a peptide of no more than 50 amino acids,
XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
XX Glu-Pro. Also described are: (i) a method (II) for assaying hu-Asp1
XX proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
XX (1) under acidic conditions; and (b) determining the level of hu-Asp1
XX proteolytic activity; (2) a purified polynucleotide (III) comprising a
XX nucleotide sequence that hybridizes under stringent conditions to the non
XX coding strand complementary to a defined 1804 nucleotide sequence (see
XX ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
XX proteolytic activity and lacks nucleotides encoding a transmembrane

CC domain); (3) a purified polynucleotide (III') comprising a sequence that
CC hybridizes under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC comprising (III) or (III') and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence represents human-pro-APP-2(a)deltaTM (low GC), which is given in
CC an example from the present invention

XX Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;

Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
Db 2 TONGIRLPLRSGLGAPLGL 21

RESULT 19

ADJ94338 ADJ94338 standard; protein; 433 AA.

XX AC ADJ94338;

XX DT 03-JUN-2004 (first entry)

XX DE Human-pro-APP-2(a)deltaTM (low GC).

XX KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
XX neurotropic; neuroprotective; amyloid beta; mutant; mutein.

XX OS Homo sapiens.

XX OS Synthetic.

XX PN US6706485-B1.

XX PD 16-MAR-2004.

XX PF 12-APR-2000; 2000US-00548376.

XX PR 24-SEP-1998; 98US-0101594P.

XX PR 23-SEP-1999; 99US-00404133.

XX PR 23-SEP-1999; 99US-0155493P.

XX PR 23-SEP-1999; 99WO-US020881.

XX PR 13-OCT-1999; 99US-00416901.

XX PA (PHAA) PHARMACIA & UPJOHN CO.

XX PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX DR WPI; 2004-236722/22.

XX PT N-PSDB; ADJ94337.

XX XX Identifying agents that modulate activity of Asp2 aspartyl protease
XX useful for treating or preventing Alzheimer's disease involves comparing
XX APP processing activity of protease in presence and absence of test
XX agent.

XX PS Example 9; SEQ ID NO 26; 109pp; English.

XX The invention relates to identifying agents that modulate activity of
XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
XX precursor protein (APP) in the presence and absence of a test agent,
XX where Asp2 is a recombinant polypeptide and processes APP into amyloid

CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NM, designated e.g. APP695-SW
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence represents an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.

XX Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;
 Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGIGGAPLGL 41
 |||||

Db 2 TQHGIRLPRLRSGIGGAPLGL 21

RESULT 20

AD050434
 ID AD050434 standard; protein; 433 AA.

XX ADO50434;

XX 29-JUL-2004 (first entry)

XX Human-pro-Asp-2(a) deltatm mutant protein.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

XX Alzheimer's disease; gene therapy; human; mutant; mutein.

XX Homo sapiens.

XX Synthetic.

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI, 2004-387112/36.

XX N-PSDB; ADO50433.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
 PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's
 PT disease.

XX Example 9; SEQ ID NO 26; 108pp; English.

CC The invention relates to a method for identifying an agent that decreases
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase
 CC cleavage site of the amyloid precursor protein (APP). The invention is
 CC useful in preparing a composition for treating or preventing Alzheimer's
 CC disease. It is also useful in gene therapy. The present sequence is human
 CC pro-Asp-2(a) deltatm mutant protein. This sequence is used to illustrate
 CC the method of the invention.

XX Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;
 Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGIGGAPLGL 41
 |||||

Db 2 TQHGIRLPRLRSGIGGAPLGL 21

RESULT 21

ADP83954
 ID ADP83954 standard; protein; 433 AA.

XX ADP83954;

XX 23-SEP-2004 (first entry)

XX Human BACE1 mutant amino acid sequence SEQ ID NO:81.

XX human; beta-site amyloid precursor protein cleaving enzyme 1;

XX beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;

XX prodomain; engineered cleavage site; protease domain; neuroprotective;

XX nootropic; gene therapy; Alzheimer's disease; Down's syndrome; mutant.

XX Homo sapiens.

XX Synthetic.

XX WO2004056962-A2.

XX 08-JUL-2004.

XX 02-DEC-2003; 2003WO-US038314.

XX 04-DEC-2002; 2002US-0430984P.

XX (SUNE-) SUNESIS PHARM INC.

XX Ballinger M;

XX WPI; 2004-507703/48.

XX Example 1; SEQ ID NO 81; 40pp; English.

CC The present invention describes a polypeptide (I) comprising in order
 CC from the N-terminus to the C-terminus: (a) a prodomain comprising at
 CC least 6 contiguous amino acids of the 16 amino acid sequence of SEQ ID
 CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which
 CC is the longest isoform of human beta-site amyloid precursor protein (APP)
 CC cleaving enzyme 1 (BACE1), isoform A); (b) an engineered cleavage site;
 CC and (c) a protease domain. (I) is capable of being cleaved at the
 CC engineered cleavage site, and so releases a free protease domain that has
 CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (I);
 CC (2) a vector for expression of (I); and (3) a host cell expressing (I).

CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (A-beta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from Asp nucleic acid sequences are useful for detecting hu-Asp
CC nucleic acids in *in vitro* assays and in Northern and Southern blots. The
CC present sequence represents the amino acid sequence of human Asp-2b delta
CC TM(His)6 construct which has a 6 histidine tag and lacks the
CC transmembrane domain. This construct was used for bacterial expression
CC and purification of human Asp2b
XX
SQ Sequence 434 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41
XX
RESULT 26
AAE10647 ID AAE10647 standard; protein; 434 AA.
XX
AC AAE10647;
XX
DT 10-DEC-2001 (first entry)
XX
DE Human-Asp 2(b) protein lacking TM domain and containing (His)6 tag.
XX
KW Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN GB2357767-A.
XX
PD 04-JUL-2001.
XX
PE 22-SEP-2000; 2000GB-00023315.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WC-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA) PHARMACTA & UNJOHN CO.
XX
PI Bienkowiecki MJ, Gurney M;
XX
XX WPI: 2001-444208/48.
DR N-PSDB; AAD17896.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 10; Page 140-141; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary

CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is human Asp 2(b)
CC protein lacking a transmembrane (TM) domain and containing (His)6 tag.
CC This sequence is generated from human Asp 2(b) protein by the deletion of
CC its C-terminal TM domain and addition of hexa-histidine tag at its C-
CC terminus
XX
SQ Sequence 434 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41
XX
RESULT 27
AAE06892 ID AAE06892 standard; protein; 434 AA.
XX
AC AAE06892;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human-Asp2(b) deltaTM (His)6 protein.
XX
KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
KW neuroprotective; antisense therapy; Asp2(b) deltaTM (His)6 protein;
KW gene therapy.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200150829-A2.
XX
PD 19-JUL-2001.
XX
PE 09-MAY-2001; 2001WO-IB000799.
XX
PR 09-MAY-2001; 2001WO-IB000799.
XX
PR (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI: 2001-483072/52.
DR N-PSDB; AAD13277.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Claim 149; Page 169-170; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying

CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC APP nucleic acids in in vitro assays and in Northern and Southern Blots.
CC The present sequence is in human aspartyl protease 2b (Hu-Asp2b) deltaTM
CC (His)6 protein which is obtained by the deletion of C-terminal
CC transmembrane domain and addition of a hexa-Histidine tag at the C-
CC terminal end of Hu-Asp2b. Human Asp2b has beta-secretase activity
XX
SQ Sequence 434 AA;

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLSGIGAPLGL 41
DB 22 TOHGIRLPRLSGIGAPLGL 41

RESULT 28

AAE02599
ID AAE02599 standard; protein; 434 AA.

AC AAE02599;

DT 10-AUG-2001 (first entry)

DE Human aspartyl protease 2 (b) delta TM (His)6 protein.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; antiAlzheimer's; aspartyl protease 2; Asp 2;
XX beta-secretase; chromosome 11q23.3-24.1; mutant; mutcin.

OS Homo sapiens.
XX Synthetic.

XX Key Location/Qualifiers

FT Misc-difference 429

FT /note= "Encoded by CAG"

FT Misc-difference 430

FT /note= "Encoded by CAG"

FT Misc-difference 431

FT /note= "Encoded by CAG"

FT Misc-difference 432

FT /note= "Encoded by CAG"

FT Misc-difference 433

FT /note= "Encoded by CAG"

FT Misc-difference 434

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

FT /note= "Encoded by CAG"

PT protein, useful for the treatment of Alzheimer's disease.
XX
PS Example 10; Page 168-169; 183pp; English.

CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human aspartyl protease 2
CC (Asp 2) (b) delta TM (His)6 protein. Asp 2 has beta-secretase protease
XX activity
XX

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLSGIGAPLGL 41
DB 22 TOHGIRLPRLSGIGAPLGL 41

RESULT 29

AAU06621
ID AAU06621 standard; protein; 434 AA.

AC AAU06621;

DT 24-OCT-2001 (first entry)

DE Human-pro-Asp 2(b) delta TM (His)6.

XX Human; Aspartyl protease; beta-secretase; nootropic; Asp2;
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
XX amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM (His)6; mutant; mutcin.

OS Homo sapiens.
XX Synthetic.

XX Key Location/Qualifiers

FT Misc-difference 429.434

FT /note= "Encoded by CAGCAGCAGCAGCAGCAG"

FT Region 429.434

FT /label= His_tag

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

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FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

FT /note= "Nickel binding region to aid purification"

Claim 149; Page 169-170; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of
CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2
CC transmembrane domain and the Asp2 protein, and where the polypeptide and
CC the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. The invention also details polynucleotides for the Asp proteins
CC and vectors expressing them, and a polypeptide (isoform of amyloid
CC protein precursor (APP)) comprising the amino acid sequence of an APP or
CC its fragment containing an APP cleavage site recognizable by a mammalian
CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (Abeta) peptide production. APP is also useful in designing
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
CC associated with increased levels of Abeta processing is useful in assays
CC relating the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridise to Asp
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting hu-Asp nucleic acids in *in vitro* assays and in Northern and
CC Southern blots. The present sequence is Human-pro- Asp 2(b) delta TM
CC (His)6 protein, which lacks the C-terminal transmembrane domain and has a
CC His tag to aid purification

XX Sequence 434 AA;

Query Match 100.0%; Score 104; DB 1; Length 434;

Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPRLSGGAPLGL 41
|||
22 TONGIRLPRLSGGAPLGL 41

DB 22 TONGIRLPRLSGGAPLGL 41

RESULT 30

ABB78608

ID ABB78608 standard; protein; 434 AA.

AC ABB78608;

XX 16-JUL-2002 (first entry)

XX Human Asp-2(b)deltaTM(His)6 protein sequence SEQ ID NO:53.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KM Chromosome 11q23.3-24.1.

XX Homo sapiens.

XX Key Location/Qualifiers

FT MISC-difference 429 /note= "encoded by CAG"

FT MISC-difference 430 /note= "encoded by CAG"

FT MISC-difference 431 /note= "encoded by CAG"

FT MISC-difference 432 /note= "encoded by CAG"

FT MISC-difference 433 /note= "encoded by CAG"

FT MISC-difference 434 /note= "encoded by CAG"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.

XX

PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155483P.
PR 23-SEP-1999; 99WD-05020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX
XX (PDBA) PHARMACIA & UPJOHN CO.
XX
XX Bienenkowskij MJ, Gurney M;
XX WPI; 2002-397167/43.
XX N-PSDB; ABL52488.
XX

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
FT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
XX Example 10; Page 140-141; 182pp; English.

CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (I) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non-
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain); (3) a purified polynucleotide (III') comprising a sequence that
CC hybridises under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC comprising (III) or (III') and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence represents human Asp-2(b)deltaTM(His)6, which is given in an
CC example from the present invention

XX Sequence 434 AA;

Query Match 100.0%; Score 104; DB 1; Length 434;

Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPRLSGGAPLGL 41
|||
22 TONGIRLPRLSGGAPLGL 41

DB 22 TONGIRLPRLSGGAPLGL 41

RESULT 31

ADJ94365

ID ADJ94365 standard; protein; 434 AA.

AC ADJ94365;

XX 03-JUN-2004 (first entry)

XX Human-pro-Asp-2(b)deltaTM(His)6.

XX Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta; mutant; mutetrn.

XX Homo sapiens.

XX Synthetic.

XX US6706485-B1.

XX

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XX 16-MAR-2004.
PD
XX
PF 12-APR-2000; 2000US-00548376.
XX
PR 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR WPI: 2004-236722/22.
XX N-PSDB; AD034364.
XX
PT Identifying agents that modulate activity of Asp2 aspartyl protease
PT useful for treating or preventing Alzheimer's disease involves comparing
PT APP processing activity of protease in presence and absence of test
PT agent.
XX
XX Example 10; SEQ ID NO 53; 109bp; English.
XX
CC The invention relates to identifying agents that modulate activity of
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC encoded by ID 5) aspartyl protease. Involves contacting Asp2 with amyloid
CC precursor protein (APP) in the presence and absence of a test agent,
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence
CC of the test agent, and comparing the activities to identify agents that
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
CC the vector and the method of producing Hu-Asp polypeptide, an isolated
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
CC cell that can be used to screen for inhibitors of beta secretase
CC activity, novel isoforms of amyloid protein precursor (APP), where the
CC last 2 carboxy terminus amino acids of that isoform are both lysine
CC residues (e.g., those designated APP695-KK or carrying the Swedish
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
CC for assaying for beta secretase activity and screening for inhibitors of
CC beta-secretase) and polynucleotides that encode the APP proteins. The
CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing, are useful for treating or preventing
CC Alzheimer's disease. The present sequence represents an aspartyl protease
CC mutant construct (e.g. lacking a transmembrane domain and/or including a
CC caspase cleavage site) used to investigate the cleavage activity of Asp2
CC proteins.
XX
SQ Sequence 434 AA;

```

```

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 22 TQHGIRLPRLRSGIGAPLGL 41
Db 22 TQHGIRLPRLRSGIGAPLGL 41

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```

RESULT 32
AD050461
ID ADO50461 standard; protein; 434 AA.
XX
AC ADO50461;
XX
DT 29-JUL-2004 (first entry)

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XX DE Human Asp2 (b) deltatm(His) 6 protein.
XX
XX Asparyl protease; Asp: beta secretase; amyloid precursor protein; APP;
XX Alzheimer's disease; gene therapy; human.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX Key Location/Qualifiers
XX FT Misc-difference 429 /note= "Encoded by CAG"
XX FT Misc-difference 430 /note= "Encoded by CAG"
XX FT Misc-difference 431 /note= "Encoded by CAG"
XX FT Misc-difference 432 /note= "Encoded by CAG"
XX FT Misc-difference 433 /note= "Encoded by CAG"
XX FT Misc-difference 434 /note= "Encoded by CAG"
XX FT Misc-difference 434 /note= "Encoded by CAG"
XX
XX US6737510-B1.
XX
XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI: 2004-387112/36.
XX N-PSDB; AD050460.
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DNG and DSG
XX involved in processing amyloid precursor protein into amyloid beta,
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease.
XX
XX Example 10; SEQ ID NO 53; 108bp; English.
XX
XX The invention relates to a method for identifying an agent that decreases
XX the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX provides enzyme and enzymatic procedures for cleaving the beta secretase
XX cleavage site of the amyloid precursor protein (APP). The invention is
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease. It is also useful in gene therapy. The present sequence is human
XX Asp2(b)deltatm(His) 6 protein. This sequence is used to illustrate the
XX method of the invention.
XX
SQ Sequence 434 AA;

```

```

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 22 TQHGIRLPRLRSGIGAPLGL 41
Db 22 TQHGIRLPRLRSGIGAPLGL 41

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RESULT 33
ADR75374
ID ADR75374 standard; protein; 434 AA.
XX

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AC ADR75374;
 XX
 DT 18-NOV-2004 (first entry)
 XX
 DE Human Asp2(b)deltaTM(His)6 protein.
 XX
 KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
 KM chromosome identification; Alzheimer's disease; human.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key location/Qualifiers
 FT Misc-difference 429
 FT Misc-difference /note= "Encoded by CAG"
 FT Misc-difference 430
 FT Misc-difference /note= "Encoded by CAG"
 FT Misc-difference 431
 FT Misc-difference /note= "Encoded by CAG"
 FT Misc-difference 432
 FT Misc-difference /note= "Encoded by CAG"
 FT Misc-difference 433
 FT Misc-difference /note= "Encoded by CAG"
 FT Misc-difference 434
 FT Misc-difference /note= "Encoded by CAG"
 XX
 PN US2004166507-A1.
 XX
 PD 26-AUG-2004.
 XX
 PF 29-AUG-2003; 2003US-00652045.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (GURN/) GURNEY M E.
 PA (BIEN/) BIENKOMAKI M J.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Gurney ME, Bienkowaki MJ, Heinrikson RL, Parodi LA, Yan R;
 DR WPI; 2004-624916/60.
 DR N-PSDB; ADR75373.
 XX
 PT Novel purified/isolated polynucleotide encoding polypeptide having
 PT aspartyl protease activity involved in processing amyloid precursor
 PT protein into amyloid beta, useful in identifying agent decreasing
 PT activity of aspartyl protease.
 XX
 PS Example 10; SEQ ID NO 53; 107pp; English.
 XX
 CC The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (Asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that
 CC decreases the protease activity of the Asp. Asp DNA is useful in
 CC chromosome identification as they can hybridize with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
 CC present sequence is the human Asp2(b)deltaTM(His)6 protein. This sequence
 CC is used to illustrate the method of the invention.
 XX
 SQ Sequence 434 AA;
 Query Match 100.0%; Score 104; DB 1; Length 434;
 Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLRSGLGAPLGL 41
 DB 22 TQHGIRLPRLRSGLGAPLGL 41
 RESULT 34
 ID ADI64641 standard; protein; 435 AA.
 AC ADI64641;
 DT 22-APR-2004 (first entry)
 DE Mature human pro-beta-secretase (pro-BACE) protein seq id 2.
 KW crystal; glycosylated human beta-secretase; BACE; human beta-secretase;
 KW protein co-ordinate data; pro-BACE.
 XX
 OS Homo sapiens.
 PN US2004014194-A1.
 PD 22-JAN-2004.
 PF 26-MAR-2003; 2003US-00400273.
 PR 27-MAR-2002; 2002US-0367937P.
 PA (SCHE) SCHERING CORP.
 PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;
 PI Wong GT, Zhang L;
 DR WPI; 2004-167920/16.
 XX
 PT New crystal comprising a glycosylated, human beta-secretase polypeptide,
 PT useful for determining the three-dimensional structure of beta-secretase
 PT and other related proteins.
 XX
 PS Claim 15; SEQ ID NO 2; 107pp; English.
 XX
 CC The invention describes a crystal comprising a glycosylated, human beta-
 CC secretase polypeptide characterised by structural coordinates comprising
 CC a root mean square deviation of conserved residue backbone atoms of less
 CC than 1.5 Angstrom when superimposed on backbone atoms described by
 CC structural coordinates. The crystal is useful for determining the three-
 CC dimensional structure of beta-secretase and other related proteins. This
 CC is the amino acid sequence of human beta-secretase (BACE) protein.
 XX
 SQ Sequence 435 AA;
 Query Match 100.0%; Score 104; DB 1; Length 435;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLRSGLGAPLGL 41
 DB 1 TQHGIRLPRLRSGLGAPLGL 20
 RESULT 35
 ID ADP83949 standard; protein; 439 AA.
 AC ADP83949;
 DT 23-SEP-2004 (first entry)
 DE Human BACE1 mutant amino acid sequence SEQ ID NO:76.
 DE human; beta-site amyloid precursor protein cleaving enzyme 1;
 KW

KM beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;
 KM prodomain; engineered cleavage site; protease domain; neuroprotective;
 KM neurotropic; gene therapy; Alzheimer's disease; Down's syndrome; mutant.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN WO2004056962-A2.
 XX
 PD 08-JUL-2004.
 XX
 PF 02-DEC-2003; 2003WO-US038314.
 XX
 PR 04-DEC-2002; 2002US-0430984P.
 XX
 PA (SUNE-) SUNESIS PHARM INC.
 XX
 PI Ballinger M;
 XX
 DR WPI; 2004-507703/48.
 XX
 PT New polypeptides for producing homogeneously processed preparations of
 PT beta site amyloid precursor protein-cleaving enzyme comprises a
 PT prodomain, an engineered cleavage site and a protease domain.
 XX
 PS Example 1; SEQ ID NO 76; 40pp; English.
 XX
 CC The present invention describes a polypeptide (I) comprising in order
 CC from the N-terminus to the C-terminus: (a) a prodomain comprising at
 CC least 6 contiguous amino acids of the 15 amino acid sequence of SEQ ID
 CC NO:3 (ADP83877), comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which
 CC is the longest isoform of human beta-site amyloid precursor protein (APP)
 CC cleaving enzyme 1 (BACE1), isoform A; (b) an engineered cleavage site;
 CC and (c) a protease domain. (I) is capable of being cleaved at the
 CC engineered cleavage site, and so releases a free protease domain that has
 CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (I);
 CC (2) a vector for expression of (I); and (3) a host cell expressing (I).
 CC (I) has neuroprotective and neurotropic activities, and can be used in gene
 CC therapy. (I) can be used for producing preparations of homogeneously
 CC processed BACE that may be used for e.g. studying or treating diseases
 CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is
 CC located on chromosome 11, more specifically to 11q23.2-23.3. The present
 CC sequence represents a mutant human BACE1 amino acid sequence, which is
 CC used in an example from the present invention.
 CC
 SQ Sequence 439 AA;
 Query Match 100.0%; Score 104; DB 1; Length 439;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 22 TQHGIRLPRLRSGLGAPLGL 41
 Db 1 TQHGIRLPRLRSGLGAPLGL 20

OS Enterobacteria phage T7.
 OS Chimeric.
 XX
 PN WO200017369-A2.
 XX
 PD 30-MAR-2000.
 XX
 PF 23-SEP-1999; 99WO-US020881.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PL Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 XX
 DR WPI; 2000-303209/26.
 DR N-PSDB; AAA15668.
 XX
 PT New enzyme designated human aspartase useful in research into Alzheimer's
 PT Disease is capable of cleaving amyloid protein precursor at the beta
 PT secretase site to produce amyloid beta peptide.
 XX
 PS Example 9; Fig 6; 183pp; English.
 XX
 CC This sequence represents a modified version of the human aspartase 2
 CC (Asp2) amino acid sequence. The sequence is used in the bacterial
 CC expression of human Asp2. The invention relates to a protease (e.g.
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
 CC protein (APP). The protease contains a sequence encoding the amino acid
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
 CC amino acids. When mutated the APP gene causes an autosomal dominant form
 CC of Alzheimer's disease. APP localises to the cell surface membrane and
 CC have a single C-terminal transmembrane domain. Proteolytic processing of
 CC APP produces the amyloid beta protein, which is possibly very important
 CC in Alzheimer's disease. The invention includes a nucleotide sequence
 CC encoding the protease, a vector containing the nucleotide sequence, and a
 CC cell line comprising the vector. Methods for screening for inhibitors of
 CC aspartase protein and nucleotide sequences and the methods for
 CC identifying inhibitors of the protease, are useful in the treatment of
 CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to
 CC correct OS field.) (Updated on 12-SEP-2003 to standardise OS field)
 CC
 SQ Sequence 446 AA;
 Query Match 100.0%; Score 104; DB 1; Length 446;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 22 TQHGIRLPRLRSGLGAPLGL 41
 Db 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 36
 ID AAY88431 standard; protein: 446 AA.
 AC AAY88431;
 XX
 DT 12-SEP-2003 (revised)
 DT 06-AUG-2003 (revised)
 DT 03-AUG-2000 (first entry)
 XX
 DE T7-caspase-human-pro-Asp-2(a)-deltaTM amino acid sequence.
 XX
 KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
 KM Alzheimer's disease; beta secretase site;
 KM T7-caspase-human-pro-Asp-2(a)-deltaTM.
 XX
 OS Homo sapiens.

RESULT 37
 ID AAU07211 standard; protein: 446 AA.
 AC AAU07211;
 XX
 DT 11-SEP-2003 (revised)
 DT 24-OCT-2001 (first entry)
 XX
 DE T7-human aspartyl protease 2a deltaTM (T7huAsp-2adeltaTM).
 XX
 KM Human; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;
 KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;
 KM beta-secretase; Alzheimer's disease; T7huAsp-2adeltaTM.
 XX
 OS Homo sapiens.
 OS Enterobacteria phage T7.
 XX
 FH Key Location/Qualifiers

FT Peptide 1..14
FT /note= "Signal peptide"
FT Protein 15..446
FT /note= "Mature T7-human aspartyl protease 2a deltaTM"
XX MO200149097-A2.
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Blenkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX N-PSDB; AAS11711.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 6; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (APP)
XX comprising the amino acid sequence of a APP or its fragment containing an
XX APP cleavage site recognizable by a mammalian beta-secretase, and further
XX comprising two lysine residues at the carboxyl terminus of the amino acid
XX sequence of the mammalian APP or APP fragment. The polypeptides are used
XX for assaying for modulators of beta-secretase activity; identifying
XX agents that inhibit the APP processing activity of human Asp2 aspartyl
XX protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
XX; and for reducing cellular production of amyloid beta (Abeta) from APP.
XX Agents identified by the above methods are useful for treating
XX Alzheimer's disease; and for identifying modulators of amyloid-beta
XX (Abeta) peptide production, for use in designing therapeutics for the
XX treatment or prevention of Alzheimer's disease. Probes and primers
XX derived from Asp nucleic acid sequences are useful for detecting hu-Asp
XX nucleic acids in in vitro assays and in Northern and Southern blots. The
XX present sequence represents the amino acid sequence of T7-human Asp-2a
XX delta TM which has a T7 tag and lacks the transmembrane domain. This
XX construct was used for bacterial expression and purification of human
XX Asp2a. (Updated on 11-SEP-2003 to standardise OS field)
XX
SQ Sequence 446 AA:
Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPNLSGGLGAPLGL 41
DB 15 TQHGIRLPNLSGGLGAPLGL 34

RESULT 38
AAE10638
ID AAE10638 standard; procein; 446 AA.
XX
XX AAE10638;
XX
XX 10-DEC-2001 (first entry)
DT

XX
XX T7-Human-pro-Asp 2(a) protein lacking TM domain.
XX
XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neuroprotective;
XX T7-Human-pro-Asp 2(a) protein.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Blenkowski MJ, Gurney M;
XX WPI; 2001-444208/48.
XX N-PSDB; AAD17874.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 9; Fig 6; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence T7-human-pro-Asp 2(a)
XX protein lacking a transmembrane (TM) domain. This sequence is generated
XX from human Asp 2(a) protein by the addition of a T7 tag at its N-terminal
XX end and the deletion of its C-terminal TM domain
XX
SQ Sequence 446 AA:
Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPNLSGGLGAPLGL 41
DB 15 TQHGIRLPNLSGGLGAPLGL 34

RESULT 39
AAE06868
ID AAE06868 standard; protein; 446 AA.
XX
XX AAE06868;
XX
XX 23-OCT-2001 (first entry)
DT T7-Human-pro-Asp2(a) deltaTM protein.
DE

```

XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KM neuroprotective; antisense therapy; gene therapy;
KM pro-Asp2(a) deltatM protein.
XX Homo sapiens.
OS Synthetic.
XX MO200150829-A2.
XX 19-JUL-2001.
XX 09-MAY-2001; 2001WO-IB000799.
XX 09-MAY-2001; 2001WO-IB000799.
XX 09-MAY-2001; 2001WO-IB000799.
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX N-PSDB; AAD13030.
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX Example 9; Fig 6; 185pp; English.
XX The invention relates to human aspartyl proteases (hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma-secretase. Hu-APP DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting hu-
XX APP nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present sequence is T7-Human-pro-aspartyl protease 2a (Asp2a) deltatM
XX protein which is obtained by the addition of T7 tag at the N-terminal
XX end and deletion of the transmembrane domain. Human Asp2a has beta-
XX secretase activity
XX Sequence 446 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 446;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 22 TOHGIRLPLRSGLGAPIGL 41
XX 15 TOHGIRLPLRSGLGAPIGL 34
XX
XX RESULT 40
XX AA02590
XX ID AAB02590 standard; protein; 446 AA.
XX AC AAE02590;
XX

```

```

DT 10-AUG-2001 (first entry)
XX T7-Human-pro-Asp-2(a) delta TM protein.
DE
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KM Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
KM beta-secretase; Asp-2a delta TM.
XX Homo sapiens.
OS Synthetic.
XX MO200123533-A2.
XX 05-APR-2001.
XX 22-SEP-2000; 2000WO-US026080.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX Gurney M, Bienkowski MJ;
XX WPI; 2001-290516/30.
XX N-PSDB; AAD06748.
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX Example 9; Fig 6; 189pp; English.
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human T7 Aspartyl protease
XX 2a (Asp 2a) deltatM protein which is obtained by deleting the
XX transmembrane domain and adding a T7 tag at the N-terminal end. This
XX sequence has beta-secretase protease activity
XX Sequence 446 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 446;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 22 TOHGIRLPLRSGLGAPIGL 41
XX 15 TOHGIRLPLRSGLGAPIGL 34
XX
XX RESULT 41
XX AA06612
XX ID AA06612 standard; protein; 446 AA.
XX AC AA06612;
XX 24-OCT-2001 (first entry)
XX Human T7-Human-pro-Asp 2(a) delta TM fusion protein.
XX Human; Aspartyl protease; beta-secretase; nootropic; ASP2;
KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KM amyloid-beta; Abeta; T7-Human-pro-Asp 2(a) delta TM.
XX Homo sapiens.
OS Synthetic.
XX Key Location/Qualifiers
XX

```


FT Peptide 1. 14
FT /label= T7 tag
FT /note= "A16s purification of the protein when expressed
FT in E.coli"
XX WO200149098-A2.
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502549/55.
XX N-PSDB; AAS11526.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 6; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp2) protein which lacks the Asp2
XX transmembrane domain and beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the Asp proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP)) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-
XX beta (Abeta) peptide production. APP is also useful in designing
XX therapeutics for the treatment or prevention of Alzheimer's disease. APP
XX comprising the APP-SW-beta-secretase peptide sequence (NMDA), which is
XX associated with increased levels of Abeta processing is useful in assays
XX relating the Alzheimer's research. The expression vector is useful for
XX recombinantly expressing APP. Nucleic acids that hybridize to Asp
XX oligonucleotides are useful as probes or primers. The probes are useful
XX for detecting hu-Asp nucleic acids in vitro assays and in Northern and
XX Southern blots. The present sequence is the T7-Human-pro- Asp 2(a) delta
XX TM fusion protein which has a N-terminal T7 tag to aid purification when
XX expressed in E. coli
XX
XX Sequence 446 AA;
SQ
XX
XX Query Match 100.0%; Score 104; DB 1; Length 446;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

XX
XX 16-JUL-2002 (first entry)
XX
XX T7-human-pro-Asp-2(a)deltaTM protein sequence SEQ ID NO:22.
XX
XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
XX amyloid precursor protein; APP.
XX
XX Homo sapiens.
XX
XX GB2367060-A.
XX
XX 27-MAR-2002.
XX
XX 29-OCT-2001; 2001GB-00025934.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX 22-SEP-2000; 2000GB-00023315.
XX
XX (PHAR) PHARMACIA & UPJOHN CO.
XX
XX Bienkowski MJ, Gurney M;
XX WPI; 2002-397167/43.
XX N-PSDB; ABL52466.
XX
XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
XX protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
XX Example 9; Fig 6; 182pp; English.
XX
XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
XX substrate (I) which comprises a peptide of no more than 50 amino acids,
XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
XX Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 with
XX proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
XX (1) under acidic conditions; and (b) determining the level of hu-Asp1
XX proteolytic activity; (2) a purified polynucleotide (II) comprising a
XX nucleotide sequence that hybridizes under stringent conditions to the non-
XX coding strand complementary to a defined 1804 nucleotide sequence (see
XX AB52456) where the nucleotide sequence encodes a polypeptide having Asp1
XX domain); (3) a purified polynucleotide (III') comprising a sequence that
XX hybridizes under stringent conditions to (III) (the nucleotide sequence
XX encodes a polypeptide further lacking a pro-peptide domain corresponding
XX to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
XX comprising (III) or (III'); and (5) a host cell (V) transformed or
XX transfected with (III), (III') and/or (IV). The hu-Asp1 protease
XX substrate (I) may be used as an enzyme substrate in assays to detect
XX aspartyl protease activity, (II) and therefore diagnose diseases
XX associated with aberrant hu-Asp1 expression and activity such as
XX Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
XX hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
XX sequence represents human T7-human-pro-Asp-2(a)deltaTM, which is given in
XX an example from the present invention
XX
XX Sequence 446 AA;
SQ
XX
XX Query Match 100.0%; Score 104; DB 1; Length 446;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

ID ADJ94334 standard; protein; 446 AA.
XX
AC ADJ94334;
XX
DT 03-JUN-2004 (first entry)
XX
DE Human T7-human-pro-Asp-2(a)deltaTM.
XX
KW Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
KW neurotrophic; neuroprotective; amyloid beta; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN US6706485-B1.
XX
PD 16-MAR-2004.
XX
PF 12-APR-2000; 2000US-00548376.
XX
PR 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-05020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHMA) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-236722/22.
DR N-PSDB; ADJ94333.
XX
XX
PT Identifying agents that modulate activity of Asp2 aspartyl protease
PT useful for treating or preventing Alzheimer's disease involves comparing
PT APP processing activity of protease in presence and absence of test
PT agent.
XX
XX
PS Example 9; SEQ ID NO 22; 109pp; English.
XX
XX
CC The invention relates to identifying agents that modulate activity of
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
CC precursor protein (APP) in the presence and absence of a test agent,
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence
CC of the test agent, and comparing the activities to identify agents that
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
CC the vector and the method of producing Hu-Asp polypeptide, an isolated
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
CC cell that can be used to screen for inhibitors of beta secretase
CC activity, novel isoforms of amyloid protein precursor (APP), where the
CC last 2 carboxy terminus amino acids of that isoform are both lysine
CC residues (e.g. those designated APP695-KK or carrying the Swedish
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW
CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
CC for assaying for beta secretase activity and screening for inhibitors of
CC beta-secretase) and polynucleotides that encode the APP proteins. The
CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing, are useful for treating or preventing
CC Alzheimer's disease. The present sequence represents an aspartyl protease
CC mutant construct (e.g. lacking a transmembrane domain and/or including a
CC caspase cleavage site) used to investigate the cleavage activity of Asp2
CC proteins.
XX
SQ Sequence 446 AA;

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGIGCAPLGL 41
DB 15 TQHGIRLPRLRSGIGCAPLGL 34

RESULT 44
ID ADO50430 standard; protein; 446 AA.
AC ADO50430;
XX
DT 29-JUL-2004 (first entry)
XX
DE T7-Human-pro-Asp-2(a)deltaTM protein.
XX
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human.
XX
OS Homo sapiens.
XX
PN US6737510-B1.
XX
PD 18-MAY-2004.
XX
PF 12-APR-2000; 2000US-00548373.
XX
PR 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-05020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHMA) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-387112/36.
DR N-PSDB; ADO50429.
XX
XX

PT New Asp2 aspartyl protease protein comprising tripeptides DNG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
XX
PS Example 9; SEQ ID NO 22; 108pp; English.
XX
XX

CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is T7-
CC Human-pro-Asp-2(a)deltaTM protein. This sequence is used to illustrate
CC the method of the invention.
XX
SQ Sequence 446 AA;

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGIGCAPLGL 41
DB 15 TQHGIRLPRLRSGIGCAPLGL 34

RESULT 45
ADR5343
ID ADR5343 standard; protein; 446 AA.

```

AC      - ADR75343;
AD      18-NOV-2004 (first entry)
AE      XX
AF      DE
AG      T7-Human-pro-Asp-2(a)deltaTM protein.
AH      XX
AI      KW
AJ      Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
AK      chromosome identification; Alzheimer's disease; human.
AL      XX
AM      Homo sapiens.
AN      OS
AO      Synthetic.
AP      US2004166507-A1.
AQ      EN
AR      26-AUG-2004.
AS      PD
AT      XX
AU      29-AUG-2003; 2003US-00652045.
AV      PF
AW      24-SEP-1998; 98US-0101594P.
AX      PR
AY      23-SEP-1999; 99US-00404133.
AZ      PR
BA      23-SEP-1999; 99US-0155493P.
BB      PR
BC      13-OCT-1999; 99US-00416901.
BD      XX
BE      (GURNEY/) GURNEY M E.
BF      PA
BG      (BIEN/) BIENKOWAKI M J.
BH      PA
BI      (HEIN/) HEINRIKSON R L.
BJ      (PARO/) PARODI L A.
BK      PA
BL      (YANR/) YAN R.
BM      XX
BN      Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
BO      XX
BP      WI; 2004-624916/60.
BQ      DR
BR      N-PSDB; ADR75342.
BS      XX
BT      Novel purified/isolated polynucleotide encoding polypeptide having
BU      aspartyl protease activity involved in processing amyloid precursor
BV      PT
BW      protein into amyloid beta, useful in identifying agent decreasing
BX      PT
BY      XX
BZ      Example 9; SEQ ID NO 22; 107pp; English.
CA      PS
CB      XX
CC      The invention relates to nucleic acid sequences encoding aspartyl
CD      CC
CE      protease (Asp) polypeptides having aspartyl protease activity involved in
CF      CC
CG      processing amyloid precursor protein (APP) into amyloid beta. The
CH      CC
CI      invention also relates to a method for identifying an agent that
CJ      CC
CK      decreases the protease activity of the Asp. Asp DNA is useful in
CL      CC
CM      chromosome identification as they can hybridise with a specific location
CN      CC
CO      on a human chromosome and in identifying the relationship between genes
CP      CC
CQ      and diseases (particular gene responsible for causing diseases). It is
CR      CC
CS      also useful for identifying candidates to modulate the progression of
CT      CC
CU      Alzheimer's disease. Asp is useful in raising antibodies that are useful
CV      CC
CW      in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CX      CC
CY      present sequence is the T7-Human-pro-Asp-2(a)deltaTM protein. This
CZ      CC
DA      sequence is used to illustrate the method of the invention.
DB      CC
DC      SQ
DE      Sequence 446 AA;
DF      Query Match 100.0%; Score 104; DB 1; Length 446;
DG      Best Local Similarity 100.0%; Pred. No. 33;
DH      Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0
DI      Oy 22 TOHGIRLPLRSGLGAPGL 41
DJ      |||
DK      |||
DL      |||
DM      |||
DN      |||
DO      |||
DP      |||
DQ      15 TOHGIRLPLRSGLGAPGL 34
DR      DB
DS      RESULT 46
DT      ID AA588438 standard; protein; 453 AA.
DU      XX
DV      AC AA588438;
DX      XX

```

```

DT      03-AUG-2000   (first entry)
XX
DE      Modified human aspartyl protease 2 (Asp2) amino acid sequence.
XX
KM      Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
XX      Alzheimer's disease; beta secretase site.
XX
OS      Homo sapiens.
XX
PN      WO200017369-A2.
XX
PD      30-MAR-2000.
XX
PF      23-SEP-1999;    99WO-US020881.
XX
PR      24-SEP-1998;    98US-0101594P.
XX
PA      (PHMA ) PHARMACIA & UPJOHN CO.
XX
Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
PI      WPI; 2000-303209/26.
DR      N-PSDB; AAA15688.
XX
PT      New enzyme designated human aspartase useful in research into Alzheimer's
PT      Disease is capable of cleaving amyloid protein precursor at the beta
PT      secretase site to produce amyloid beta peptide.
XX
PS      Example 10; Page 169-172; 183pp; English.
XX
CC      This sequence represents a modified human aspartyl protease 2 (Asp2)
CC      amino acid sequence. Asp2 encoded by this sequence has the C-terminal
CC      transmembrane domain deleted. The invention relates to a protease (e.g.
CC      Asp2) capable of cleaving the beta secretase site of amyloid precursor
CC      protein (APP). The protease contains a sequence encoding the amino acid
CC      sequence DTG and a sequence encoding DSG or DTG separated by 100-300
CC      amino acids. When mutated the APP gene causes an autosomal dominant form
CC      of Alzheimer's disease. APP localises to the cell surface membrane and
CC      have a single C-terminal transmembrane domain. Proteolytic processing of
CC      APP produces the amyloid beta protein, which is possibly very important
CC      in Alzheimer's disease. The invention includes a nucleotide sequence
CC      encoding the protease, a vector containing the nucleotide sequence, and a
CC      cell line comprising the vector. Methods for screening for inhibitors of
CC      beta secretase activity are also given in the invention. The human
CC      aspartase protein and nucleotide sequences and the methods for
CC      identifying inhibitors of the protease, are useful in the treatment of
CC      and research in to Alzheimer's disease
XX
SQ      Sequence 453 AA;
XX
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY      22 TGGTGTPLRSLGLGAPLGL 41
        |||||
DB      22 TGGTGTPLRSLGLGAPLGL 41
RESULT 47
ID      AAU07215
AAU07215 AAU07215 standard; protein; 453 AA.
AC      AAU07215;
XX
DE      24-OCT-2001 (first entry)
XX
KM      Human aspartyl protease 2a deltatm (Huhsp-2adeltatm).
XX
KM      Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
KM      aspartyl protease 2; Asp2; amyloid protein precursor APP;
KM      beta-secretase; Alzheimer's disease; Huhsp-2adeltatm.
XX

```

```

OS Homo sapiens.
XX Key Location/Qualifiers
FH Peptide 1..21
FT /note="Signal peptide"
FT Protein 22..453
FT /note="Mature human aspartyl protease 2a deltam"
XX
XX MO200149097-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX PI Bienkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;
XX
XX DR MPI: 2001-502548/55.
XX DR N-PSDB; AAS11715.
XX
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX
XX Claim 149, Fig 11; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX CC and the fragment retain the beta-secretase activity of the mammalian Asp2
XX CC protein. Also included is an isoform of amyloid protein precursor (APP)
XX CC comprising the amino acid sequence of a APP or its fragment containing an
XX CC APP cleavage site recognizable by a mammalian beta-secretase, and further
XX CC comprising two lysine residues at the carboxyl terminus of the amino acid
XX CC sequence of the mammalian APP or APP fragment. The polypeptides are used
XX CC for assaying for modulators of beta-secretase activity; identifying
XX CC agents that inhibit the APP processing activity of human Asp2 aspartyl
XX CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
XX CC Agents identified by the above methods are useful for treating
XX CC Alzheimer's disease; and for identifying modulators of amyloid-beta
XX CC (Abeta) peptide production, for use in designing therapeutics for the
XX CC treatment or prevention of Alzheimer's disease. Probes and primers
XX CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
XX CC nucleic acids in in vitro assays and in Northern and Southern blots. The
XX CC present sequence represents the amino acid sequence of human Asp-2a delta
XX CC TM construct which lacks the transmembrane domain. This construct was
XX CC used for bacterial expression and purification of human Asp2a
XX
XX SQ Sequence 453 AA;

```

```

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy 22 TONGIRLPRLRSGLGAPLGL 41
Db 22 TONGIRLPRLRSGLGAPLGL 41

```

```

RESULT 48
AAE10642
ID AAE10642 standard; protein; 453 AA.
XX
AC AAE10642;

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```

XX
XX DT 10-DEC-2001 (first entry)
XX
XX DE Human-Asp 2(a) protein lacking transmembrane domain.
XX
XX KW Human; aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;
XX KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective.
XX
XX OS Homo sapiens.
XX OS Synthetic.
XX
XX FH Key Location/Qualifiers
XX FT Misc-difference 214 /note="Encoded by CAC"
XX
XX PN GB2357767-A.
XX
XX PD 04-JUL-2001.
XX
XX PF 22-SEP-2000; 2000GB-00023315.
XX
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99WO-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX PR 06-DEC-1999; 99US-0169232P.
XX
XX PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX PI Bienkowski MJ, Gurney M;
XX
XX DR MPI: 2001-444208/48.
XX DR N-PSDB; AAD17878.
XX
XX PT Polypeptide comprising fragments of human aspartyl protease with amyloid
XX PT precursor protein processing activity and alpha-secretase activity, for
XX PT identifying modulators useful in treating Alzheimer's disease.
XX
XX PS Example 10; Fig 11; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX CC proteins which lack transmembrane domain or amino terminal domain or
XX CC cytoplasmic domain and retains alpha-secretase activity and amyloid
XX CC protein precursor (APP) processing activity. The proteins of the
XX CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX CC activity, where modulators that increase hu-Asp1 alpha-secretase
XX CC are useful for treating Alzheimer's disease (AD) which causes progressive
XX CC dementia with consequent formation of amyloid plaques, neurofibrillary
XX CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX CC with the substrate under acidic conditions and determining the level of
XX CC hu-Asp1 proteolytic activity. The present sequence is human Asp 2(a)
XX CC protein lacking a transmembrane (TM) domain. This sequence is generated
XX CC by the deletion of the C-terminal TM domain of human Asp 2(a) protein
XX
XX SQ Sequence 453 AA;

```

```

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy 22 TONGIRLPRLRSGLGAPLGL 41
Db 22 TONGIRLPRLRSGLGAPLGL 41

```

```

RESULT 49
AAE06872
ID AAE06872 standard; protein; 453 AA.
XX
AC AAE06872;

```

```
XX 23-OCT-2001 (first entry)
XX
XX
DB Human-Asp2(a) deltaTM protein.
XX
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
XX neuroprotective; antisense therapy; Asp2(a) deltaTM protein;
XX gene therapy.
XX
XX Homo sapiens.
XX OS
XX Synthetic.
XX
XX Key Location/Qualifiers
XX FH Misc-difference 214
XX FT /note= "Encoded by CAC"
XX
XX W0200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARODI/) PARODI L A.
XX (YANR/) YAN R.
XX
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX DR WPI: 2001-483072/52.
XX DR N-PSDB; AAD13034.
XX
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX
XX PS Claim 149; Fig 11; 185pp; English.
XX
XX CC The invention relates to human aspartyl proteases (Hu-App), beta-amyloid
XX CC precursor protein (APP) isoforms and their corresponding DNA molecules.
XX CC Human aspartyl proteases can act as beta-secretase proteases useful for
XX CC treating Alzheimer's disease. APP isoforms are useful for identifying
XX CC modulators of amyloid-beta peptide production, for use in designing
XX CC therapeutics for the treatment and prevention of Alzheimer's disease,
XX CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX CC and neuronal loss. APP isoforms are also used in methods for identifying
XX CC inhibitors and modulators of human Asp2 activity. The invention relates
XX CC to a method for identifying agents that modulate the activity of human
XX CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX CC as a means to screen in cellular assays for the inhibitors of beta- and
XX CC gamma-secretase. Hu-App DNA fragments are useful as probes or primers in
XX CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX CC APP nucleic acids in in vitro assays and in Northern and Southern blots.
XX CC The present sequence is Human aspartyl protease 2a (Hu-Asp2a) deltaTM
XX CC protein which is obtained by the deletion of transmembrane domain at the
XX CC C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase activity
XX
XX Sequence 453 AA;
```

```
RESULT 50
AAE02594
ID AAE02594 standard; protein; 453 AA.
XX
XX AAE02594;
AC
XX 10-AUG-2001 (first entry)
XX
XX Human-Asp-2(a) delta TM protein.
XX
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; Asp-2a delta TM.
XX
XX Homo sapiens.
XX OS
XX Synthetic.
XX
XX Key Location/Qualifiers
XX FH Misc-difference 214
XX FT /note= "Encoded by CAC"
XX
XX W0200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX
XX WPI: 2001-290516/30.
XX DR N-PSDB; AAD06752.
XX
XX PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX PT protein, useful for the treatment of Alzheimer's disease.
XX
XX PS Example 10; Fig 11; 189pp; English.
XX
XX CC The present invention relates to enzymes for cleaving the alpha-
XX CC secretase site of the amyloid precursor protein (APP) and methods of
XX CC identifying those enzymes. The methods may be used to identify enzymes
XX CC that may be used to cleave the alpha-secretase cleavage site of the APP
XX CC protein. The enzymes may be used to treat or modulate the progress of
XX CC Alzheimer's disease. The present sequence is human aspartyl protease 2a
XX CC (Asp-2a) deltaTM protein which is obtained by deleting its transmembrane
XX CC domain. This sequence has beta-secretase protease activity
XX
XX Sequence 453 AA;
```

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

22 TQHGIRLPRLRSGLGAPLGL 41
22 TQHGIRLPRLRSGLGAPLGL 41

Db

RESULT 51
AAU06616
ID AAU06616 standard; protein; 453 AA.
XX
XX AAU06616;
AC
XX
XX 24-OCT-2001 (first entry)
XX

DE Human-pro-Asp 2(a) delta TM.
 XX
 KM Human; Aspartyl protease; beta-secretase; nontropic; ASP2;
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 XX amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM; mutant; mutein.
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key
 FT Peptide 1..21
 FT Protein /label= Signal_peptide
 FT 22..453
 FT /label= Mature_Human_pro_Asp_2(a)_delta_TM
 FT Misc-difference 214
 FT /note= "Encoded by CAC"
 XX
 XX MO200149098-A2.
 PD 12-JUL-2001.
 XX
 PF 09-MAY-2001; 2001WO-1B000798.
 XX
 PR 09-MAY-2001; 2001WO-1B000798.
 XX
 PA (BIEN/) BINKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX WPI: 2001-502549/55.
 DR N-PSDB; AAS11530.
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Claim 149; Page 160; 185pp; English.
 XX
 CC The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutic for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLPA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence is Human-pro-Asp 2(a) delta TM
 CC protein, which lacks the C-terminal transmembrane domain
 XX
 XX Sequence 453 AA;
 SQ
 Query Match 100.0%; Score 104; DB 1; Length 453;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLP LNSGLGAPLGL 41
 DB 22 TQHGIRLP LNSGLGAPLGL 41
 RESULT 52
 ABB78603
 ID ABB78603 standard; protein; 453 AA.
 AC ABB78603;
 XX
 AC 16-JUL-2002 (first entry)
 XX
 DT Human Asp-2(a)deltaTM protein sequence SEQ ID NO:30.
 XX
 DE Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
 KW chromosome 11q23.3-24.1.
 XX
 OS Homo sapiens.
 OS
 FH Key
 FT Misc-difference 214
 FT /note= "encoded by CAC"
 XX
 XX GBB367060-A.
 XX
 PD 27-MAR-2002.
 XX
 PF 29-OCT-2001; 2001GB-00025934.
 XX
 PR 23-SRP-1999; 99US-000404133.
 PR 23-SRP-1999; 99US-0155493P.
 PR 23-SRP-1999; 99WO-05020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 PR 22-SRP-2000; 2000GB-00023315.
 XX
 PA (PHMA) PHARMACIA & UPJOHN CO.
 XX
 PI Bienkowski MJ, Gurney M;
 XX WPI: 2002-397167/43.
 DR N-PSDB; ABL52470.
 XX
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
 XX
 PS Example 10; Fig 11; 182pp; English.
 XX
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (I) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 CC comprising (III) or (III'), and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence represents human Asp-2(a)deltaTM, which is given in an example

```
CC from the present invention
XX Sequence 453 AA;
SQ
Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGGAPLGL 41
DB 22 TQHGIRLPRLRSGGAPLGL 41
RESULT 53
ADJ94342
ID ADJ94342 standard; protein; 453 AA.
AC ADJ94342;
XX
DT 03-JUN-2004 (first entry)
DE Human-pro-Asp-2(a)deltaTM.
XX
KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
KM neurotropic; neuroprotective; amyloid beta; mutant; mutein.
OS Homo sapiens.
OS Synthetic.
XX
PN US6706485-B1.
PD 16-MAR-2004.
XX
PF 12-APR-2000; 2000US-00548376.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-236722/22.
DR N-PSDB; ADJ94341.
XX
PT Identifying agents that modulate activity of Asp2 aspartyl protease
PT useful for treating or preventing Alzheimer's disease involves comparing
PT APP processing activity of protease in presence and absence of test
PT agent.
XX
PS Example 10; SEQ ID NO 30; 109pp; English.
XX
CC The invention relates to identifying agents that modulate activity of
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
CC precursor protein (APP) in the presence and absence of a test agent,
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence
CC of the test agent, and comparing the activities to identify agents that
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
CC the vector and the method of producing Hu-Asp polypeptides, identifying a
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
CC cell that can be used to screen for inhibitors of beta secretase
CC activity, novel isoforms of amyloid protein precursor (APP), where the
CC last 2 carboxy terminus amino acids of that isoform are both lysine
CC residues (e.g. those designated APP695-KK or carrying the Swedish
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
```

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CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
CC for assaying for beta secretase activity and screening for inhibitors of
CC beta-secretase) and polynucleotides that encode the APP proteins. The
CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing are useful for treating or preventing
CC Alzheimer's disease. The present sequence represents an aspartyl protease
CC mutant construct (e.g. lacking a transmembrane domain and/or including a
CC caspase cleavage site) used to investigate the cleavage activity of Asp2
CC proteins.
SQ Sequence 453 AA;
QY
Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
DB 22 TQHGIRLPRLRSGGAPLGL 41
QY 22 TQHGIRLPRLRSGGAPLGL 41
RESULT 54
ADJ50438
ID ADJ50438 standard; protein; 453 AA.
XX
AC ADJ50438;
XX
DT 29-JUL-2004 (first entry)
DE Human Asp-2(a)deltaTM mutant protein.
XX
KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KM Alzheimer's disease; gene therapy; human; gene; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN US6737510-B1.
PD 16-MAY-2004.
XX
PF 12-APR-2000; 2000US-00548373.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-387112/36.
DR N-PSDB; ADJ50437.
XX
PT New APP2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 10; SEQ ID NO 30; 108pp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is human
CC Asp-2(a)deltaTM mutant protein. This sequence is used to illustrate the
```

CC method of the invention.
 XX
 SQ Sequence 453 AA;

Query Match 100.0%; Score 104; DB 1; Length 453;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
 DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 55
 ADR75351
 ID ADR75351 standard; protein; 453 AA.
 XX
 AC ADR75351;
 DT 18-NOV-2004 (first entry)
 XX
 DE Human Asp-2(a) delcATM mutant protein.
 XX
 KW Asparyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
 XX chromosome identification; Alzheimer's disease; human; mutant; muten.
 OS Homo sapiens.
 OS Synthetic.
 FH Key Location/Qualifiers
 FT Misc-difference 214
 FT /note= "Encoded by CAC"
 XX
 PN US2004166507-A1.
 XX
 PD 26-AUG-2004.
 XX
 PF 29-AUG-2003; 2003US-00652045.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 XX 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (GURN/) GURNEY M E.
 PA (BIEN/) BIENKOWAKI M J.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;
 XX WPI; 2004-624916/60.
 DR N-PSDB; ADR75350.
 XX
 PT Novel purified/isolated polynucleotide encoding polypeptide having
 XX aspartyl protease activity involved in processing amyloid precursor
 PT protein into amyloid beta, useful in identifying agent decreasing
 PT activity of aspartyl protease.
 XX
 PS Example 10; SEQ ID NO 30; 107bp; English.
 XX
 CC The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (Asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that
 CC decreases the protease activity of the Asp. Asp DNA is useful in
 CC chromosome identification as they can hybridise with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The

CC present sequence is the human Asp-2(a) delcATM mutant protein. This
 CC sequence is used to illustrate the method of the invention.
 XX
 SQ Sequence 453 AA;

Query Match 100.0%; Score 104; DB 1; Length 453;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
 DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 56
 ADJ57781
 ID ADJ57781 standard; protein; 454 AA.
 XX
 AC ADJ57781;
 DT 06-MAY-2004 (first entry)
 XX
 DE BACE WT R57DEL protein.
 XX
 KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
 XX Alzheimer's disease.
 OS Synthetic.
 OS WO2004011641-A2.
 PN
 PD 05-FEB-2004.
 XX
 PF 25-JUL-2003; 2003WO-GB003200.
 XX
 PR 26-JUL-2002; 2002US-0398681P.
 XX
 PA (ASTE-) ASTEX TECHNOLOGY LTD.
 XX
 PI Vulliard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
 XX WPI; 2004-169242/16.
 DR N-PSDB; ADJ57780.
 XX
 PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
 PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
 PT syndrome.
 XX
 PS Claim 10; SEQ ID NO 10; 145bp; English.
 XX
 CC The present invention relates to a beta site APP cleaving enzyme (BACE)
 CC protein. The compound or the composition is useful in medicine and the
 CC BACE crystal structure is useful for drug discovery. The BACE protein,
 CC compounds, pharmaceutical compositions, medicament, drug or other
 CC composition comprising the compound is useful for treating or preventing
 CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
 CC present sequence represents the DNA sequence for a BACE protein.
 XX
 SQ Sequence 454 AA;

Query Match 100.0%; Score 104; DB 1; Length 454;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
 DB 22 TONGIRLPLRSGGAPLGL 43

RESULT 57
 ADC81563
 ID ADC81563 standard; protein; 455 AA.

AC ADC81563;
XX
DT 01-JAN-2004 (first entry)
XX
XX Recombinant BACE protein from PET11a-P33K-BACE SEQ ID NO:7.
DE
XX
XX human; BACE; modification; Pro33lys; pro-enzyme.
KM
XX
XX Synthetic.
OS
XX Homo sapiens.
OS
XX WO2003072733-A2.
PN
XX
XX 04-SEP-2003.
PD
XX
XX 21-FEB-2003; 2003WO-US005508.
PF
XX
XX 21-FEB-2002; 2002US-0358651P.
PR
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
PA
XX
XX Chou K, Howe JW;
PI
XX
XX WPI: 2003-712719/67.
DR
XX
XX N-PSDB; ADC81562.
DR
XX
XX BACE polypeptides having Pro33lys modification, useful in determining
PT possible mutations, which will inhibit enzyme activity, and in
PT determining potential active site for target molecules.
PT
XX
XX Example 1; Fig 4A-B; 38pp; English.
PS
XX
XX The present invention describes an isolated polypeptide (1) comprising or
CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),
CC and comprising human BACE having the modification Pro33lys. Also
CC described: (1) a composition comprising an active human BACE enzyme
CC comprising the pro-enzyme sequence of BACE having the modification
CC (1); (3) an isolated polynucleotide comprising a sequence encoding
CC (1); (3) an isolated polynucleotide consisting of (2), or a
CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an
CC expression vector comprising the polynucleotide of (2), or a
CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
CC expression vector can produce the Pro33lys-BACE polypeptide when present
CC in a compatible host cell, when cultured under conditions that allow
CC production; (5) a recombinant host cell comprising the expression vector;
CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
CC polypeptide having Pro33lys modification may be used in determining
CC possible mutations, which will inhibit enzyme activity, and in
CC determining potential active site for target molecules. The vector
CC comprising the BACE polynucleotide is useful for producing recombinant
CC BACE polypeptides having Pro33lys modification. The present sequence
CC represents recombinant BACE expressed from a PET11a-P33K-BACE construct,
CC from the present invention.
CC
XX
XX
SQ Sequence 455 AA;
Query Match 100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 22 TOHGIRLPRLSGAGAPLGL 41
Db 24 TOHGIRLPRLSGAGAPLGL 43

RESULT 58
ADJ57785
ID ADJ57785 standard; protein; 455 AA.
XX
XX ADJ57785;
AC
XX
XX 06-MAY-2004 (first entry)
DT
XX

DE BACE N-Q R56KR57KnoHis protein.
XX
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KM Alzheimer's disease.
KM
XX
XX Synthetic.
OS
XX WO2004011641-A2.
PN
XX
XX 05-FEB-2004.
PD
XX
XX 25-JUL-2003; 2003WO-GB003200.
PF
XX
XX 26-JUL-2002; 2002US-0398681P.
PR
XX
XX (ASTE-) ASTEX TECHNOLOGY LTD.
PA
XX
XX Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
PI
XX
XX WPI: 2004-169242/16.
DR
XX
XX N-PSDB; ADJ57784.
DR
XX
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
PT
XX
XX Claim 10; SEQ ID NO 14; 145pp; English.
PS
XX
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.
CC
XX
XX
SQ Sequence 455 AA;
Query Match 100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 22 TOHGIRLPRLSGAGAPLGL 41
Db 24 TOHGIRLPRLSGAGAPLGL 43

RESULT 59
ADJ57779
ID ADJ57779 standard; protein; 455 AA.
XX
XX ADJ57779;
AC
XX
XX 06-MAY-2004 (first entry)
DT
XX
XX BACE WT R57K protein.
DE
XX
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KM Alzheimer's disease.
KM
XX
XX Synthetic.
OS
XX WO2004011641-A2.
PN
XX
XX 05-FEB-2004.
PD
XX
XX 25-JUL-2003; 2003WO-GB003200.
PF
XX
XX 26-JUL-2002; 2002US-0398681P.
PR
XX
XX (ASTE-) ASTEX TECHNOLOGY LTD.
PA
XX
XX Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
PI

XX WPI: 2004-169242/16.
DR N-PSDB; ADJ57778.
XX
PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX
PS Claim 10; SEQ ID NO 8; 145bp; English.
XX
CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.
SQ Sequence 455 AA;

Query Match 100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 24 TQHGIRLPURSGLGAPLGL 43

RESULT 60
ADJ57773
ID ADJ57773 standard; protein; 455 AA.
XX
AC ADJ57773;
XX
DT 06-MAY-2004 (first entry)
XX
DE BACE WT protein.
XX
KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease.
XX
OS Synthetic.
XX
PN WO2004011641-A2.
XX
PD 05-FEB-2004.
XX
PF 25-JUL-2003; 2003WO-GB003200.
XX
PR 26-JUL-2002; 2002US-0398681P.
XX
FA (ASTE-) ASTEX TECHNOLOGY LTD.
XX
PI Vuillard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX
DR WPI: 2004-169242/16.
DR N-PSDB; ADJ57772.
XX
PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX
PS Claim 1; SEQ ID NO 2; 145bp; English.
XX
CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.
SQ

SQ Sequence 455 AA;

Query Match 100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 24 TQHGIRLPURSGLGAPLGL 43

RESULT 61
ADJ57777
ID ADJ57777 standard; protein; 455 AA.
XX
AC ADJ57777;
XX
DT 06-MAY-2004 (first entry)
XX
DE BACE WT R56KR57K protein.
XX
KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease.
XX
OS Synthetic.
XX
PN WO2004011641-A2.
XX
PD 05-FEB-2004.
XX
PF 25-JUL-2003; 2003WO-GB003200.
XX
PR 26-JUL-2002; 2002US-0398681P.
XX
FA (ASTE-) ASTEX TECHNOLOGY LTD.
XX
PI Vuillard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX
DR WPI: 2004-169242/16.
DR N-PSDB; ADJ57776.
XX
PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX
PS Claim 10; SEQ ID NO 6; 145bp; English.
XX
CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.
SQ Sequence 455 AA;

Query Match 100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 24 TQHGIRLPURSGLGAPLGL 43

RESULT 62
ABR61929
ID ABR61929 standard; protein; 456 AA.
XX
AC ABR61929;
XX
DT 12-SEP-2003 (first entry)

```
XX DE Human promemapsin 2-T1 protein.
XX KW Memapsin 1; neurotropic; neuroprotective; memapsin 2; beta secretase;
XX KW beta-amyloid protein; Alzheimer's disease; promemapsin 2-T1; human.
XX OS Homo sapiens.
XX PN W02003039454-A2.
XX PD 15-MAY-2003.
XX PF 23-OCT-2002; 2002WO-US034324.
XX PR 23-OCT-2001; 2001US-0335952P.
XX PR 27-NOV-2001; 2001US-0333545P.
XX PR 14-JAN-2002; 2002US-0348464P.
XX PR 14-JAN-2002; 2002US-0348615P.
XX PR 20-JUN-2002; 2002US-0390804P.
XX PR 19-JUL-2002; 2002US-0397557P.
XX PR 19-JUL-2002; 2002US-0397619P.
XX PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX PA (UNIV ILLINOIS FOUND.
XX PI Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J;
XX PI Turner RT;
XX DR WPI; 2003-541410/51.
XX DR N-PSDB; ACC84850.
XX PT New peptide compounds are memapsin beta secretase inhibitors used for
XX PT treating Alzheimer's disease.
XX PS Claim 96; Fig 11; 407pp; English.
XX CC The invention relates to peptide compounds of specified formula. The
XX CC compounds exhibit memapsin 2-beta secretase inhibitory activity relative
XX CC to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid
XX CC protein. The compounds can be used for treating Alzheimer's disease. The
XX CC present sequence represents a human promemapsin 2-T1 protein
XX SQ Sequence 456 AA;

Query Match 100.0%; Score 104; DB 1; Length 456;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 63
AAV88439
ID AAV88439 standard; protein; 459 AA.
XX AC AAV88439;
XX DT 03-AUG-2000 (first entry)
XX DE Modified human aspartyl protease 2 (Asp2) amino acid sequence.
XX KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
XX KW Alzheimer's disease; beta secretase site.
XX OS Homo sapiens.
XX PN W0200017369-A2.
XX PD 30-MAR-2000.
XX PF 23-SEP-1999; 99WO-US020881.
XX PR 23-SEP-1999; 99WO-US020881.
```

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XX PR 24-SEP-1998; 98US-0101594P.
XX PA (PHAA ) PHARMACIA & UPJOHN CO.
XX PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX DR WPI; 2000-303209/26.
XX DR N-PSDB; AAA15689.
XX PT New enzyme designated human aspartase useful in research into Alzheimer's
XX PT Disease is capable of cleaving amyloid protein precursor at the beta
XX PT secretase site to produce amyloid beta peptide.
XX PS Example 10; Page 173-176; 183pp; English.
XX CC This sequence represents a modified human aspartyl protease 2 (Asp2)
XX CC amino acid sequence. Asp2 encoded by this sequence has the C-terminal
XX CC transmembrane domain deleted. The invention relates to a protease (e.g.
XX CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
XX CC protein (APP). The protease contains a sequence encoding the amino acid
XX CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
XX CC amino acids. When mutated the APP gene causes an autosomal dominant form
XX CC of Alzheimer's disease. APP localises to the cell surface membrane and
XX CC have a single C-terminal transmembrane domain. Proteolytic processing of
XX CC APP produces the amyloid beta protein, which is possibly very important
XX CC in Alzheimer's disease. The invention includes a nucleotide sequence, and a
XX CC encoding the protease, a vector containing the nucleotide sequence, and a
XX CC cell line comprising the vector. Methods for screening for inhibitors of
XX CC beta secretase activity are also given in the invention. The human
XX CC aspartase protein and nucleotide sequences and the methods for
XX CC identifying inhibitors of the protease, are useful in the treatment of
XX CC and research in to Alzheimer's disease
XX SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 64
AAV88432
ID AAV88432 standard; protein; 459 AA.
XX AC AAV88432;
XX DT 12-SEP-2003 (revised)
XX DT 06-AUG-2003 (revised)
XX DT 03-AUG-2000 (first entry)
XX DE T7-caspase-human-pro-Asp-2(a)-deltatm amino acid sequence.
XX KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
XX KW Alzheimer's disease; beta secretase site;
XX KW T7-caspase-human-pro-Asp-2(a)-deltatm.
XX OS Homo sapiens.
XX OS Enterobacteria phage T7.
XX OS Chimeric.
XX PN W0200017369-A2.
XX PD 30-MAR-2000.
XX PF 23-SEP-1999; 99WO-US020881.
XX PF 24-SEP-1998; 98US-0101594P.
XX PR 24-SEP-1998; 98US-0101594P.
```

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI: 2000-303209/26.

XX N-PSDB; AAA15669.

PT New enzyme designated human aspartase useful in research into Alzheimer's
PT Disease is capable of cleaving amyloid protein precursor at the beta
PT secretase site to produce amyloid beta peptide.

XX Example 9; Fig 7; 183pp; English.

XX This sequence represents a modified version of the human aspartase 2
CC (Asp2) nucleotide sequence. The sequence is used in the bacterial
CC expression of human Asp2L. The invention relates to a protease (e.g.
CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
CC protein (APP). The protease contains a sequence encoding the amino acid
CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
CC amino acids. When mutated the APP gene causes an autosomal dominant form
CC of Alzheimer's disease. APP localises to the cell surface membrane, and
CC have a single C-terminal transmembrane domain. Proteolytic processing of
CC APP produces the amyloid beta protein, which is possibly very important
CC in Alzheimer's disease. The invention includes a nucleotide sequence
CC encoding the protease, a vector containing the nucleotide sequence, and a
CC cell line comprising the vector. Methods for screening for inhibitors of
CC beta secretase activity are also given in the invention. The human
CC aspartase protein and nucleotide sequences and the methods for
CC identifying inhibitors of the protease, are useful in the treatment of
CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to
CC correct OS field.) (updated on 12-SEP-2003 to standardise OS field)

XX Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPKSGLGAPLGL 41
Db 28 TONGIRLPKSGLGAPLGL 47

RESULT 65

ID AAU07212 standard; protein; 459 AA.

XX AAU07212;

DT 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

XX T7-caspase-human aspartyl protease 2a deltatm.

KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;
KW beta-secretase; Alzheimer's disease; T7-caspase-HuAsp-2adeltatm.

OS Homo sapiens;
OS Enterobacteria phage T7.

XX Key Location/Qualifiers

FT Peptide 1..27

FT Protein /note="Signal peptide"

FT /note="Mature T7-caspase-aspartyl protease 2a deltatm"

XX MO200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000797.

PR 09-MAY-2001; 2001MO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRICHSON R L.

PA (PARO/) PARODI L A.

XX (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI: 2001-502548/55.

DR N-PSDB; AAA11712.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Example 9; Fig 7; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid protein precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC; and for reducing cellular production of amyloid beta (A-beta) from APP.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (A-beta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
CC nucleic acids in in vitro assays and in Northern and Southern blots. The
CC present sequence represents the amino acid sequence of T7-caspase-human-
CC Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader sequence
CC and lacks the transmembrane domain. This construct was used for bacterial
CC expression and purification of human Asp2a. (Updated on 11-SEP-2003 to
CC standardise OS field)

XX Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPKSGLGAPLGL 41

Db 28 TONGIRLPKSGLGAPLGL 47

RESULT 66

ID AAU07216 standard; protein; 459 AA.

XX AAU07216;

DT 24-OCT-2001 (first entry)

XX Human aspartyl protease 2a deltatm (His)6.

KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;
KW beta-secretase; Alzheimer's disease; HuAsp-2adeltatm (His)6.

XX Homo sapiens.

OS Homo sapiens.

XX Key Location/Qualifiers

FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..459
FT /note= "Mature human aspartyl protease 2a deltaTM (His)6"
FT Misc-difference 454
FT /note= "Encoded by cag"
FT Misc-difference 455
FT /note= "Encoded by cag"
FT Misc-difference 456
FT /note= "Encoded by cag"
FT Misc-difference 457
FT /note= "Encoded by cag"
FT Misc-difference 458
FT /note= "Encoded by cag"
FT Misc-difference 459
FT /note= "Encoded by cag"
XX WO200149097-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNE/) GURNEY M E.
XX (HEINR/) HEINRIKSON R L.
XX (PARODI/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
PI WPI: 2001-502548/55.
DR N-PSTDB: AAS11716.
DR
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
PS
XX Claim 149; Fig 12; 185pp; English.

The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid protein precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC and for reducing cellular production of amyloid beta (Abeta) from APP.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (Abeta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
CC nucleic acids in vitro assays and in Northern and Southern blots. The
CC present sequence represents the amino acid sequence of human Asp-2a delta
CC TM (His)6 construct which has a 6 histidine tag and lacks the
CC transmembrane domain. This construct was used for expression and
CC purification of human Asp2a in insect cells

Sequence 459 AA;

OY 22 TQHGIRLPRLRSGLGAPLGL 41
 |||
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 67
AAE10639
ID AAE10639 standard; protein; 459 AA.
XX
AC AAE10639;
XX
DT 10-DEC-2001 (first entry)
DE T7-Caspase-human-pro-Asp 2(a) protein lacking TM domain.
XX
Human; aspartyl protease 1; Aspl1; amyloid precursor protein; APP;
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW Amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;
T7-Caspase-human-pro-Asp 2(a) protein.
XX
Homo sapiens.
OS Synthetic.
XX
GB2357767-A.
PX
04-JUL-2001.
PD
PF 22-SEP-2000; 2000GB-00023315.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PA (PHMA) PHARMACIA & UPJOHN CO.
PI Bienkowski MJ, Gurney M;
XX
DR WP1; 2001-444208/48.
DR N-PSDB; AAD17875.
PT Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
FT identifying modulators useful in treating Alzheimer's disease.
XX
Example 9; Fig 7; 187pp; English.

The patent discloses human aspartyl protease 1 (hu-Aspl) or modified Aspl proteins which lack transmembrane domain or amino terminal domain or cytoplasmic domain and retains alpha-secretase activity and amyloid protein precursor (APP) processing activity. The proteins of the invention are useful for assaying hu-Aspl alpha-secretase activity, which in turn is useful for identifying modulators of hu-Aspl alpha-secretase activity, where modulators that increase hu-Aspl alpha-secretase activity are useful for treating Alzheimer's disease (AD) which causes progressive dementia with consequent formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. Hu-Aspl protease substrate is useful for assaying hu-Aspl proteolytic activity, by contacting hu-Aspl protein with the substrate under acidic conditions and determining the level of hu-Aspl proteolytic activity. The present sequence is human T7-Caspase-human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain. This sequence is generated from human Asp 2(a) protein by the addition of a T7 tag and caspase 8 leader sequence at its N-terminal end and the deletion of its C-terminal TM domain

Sequence 459 AA;

Query Match	100.0%	Score 104	DB 1	Length 459
Best Local Similarity	100.0%	Pred. No. 33		
Matches 20	Conservative 0	Mismatches 0	Indels 0	Gaps 0

```
Db 28 TQHGIRLPURSGIGAPLGL 47
|||||
RESULT 68
AAE10643
ID AAE10643 standard; protein; 459 AA.
XX
AC AAE10643;
XX
DT 10-DEC-2001 (first entry)
XX
DE Human-Asp 2(a) protein with (His)6 tag and lacking TM domain.
XX
KM Human; aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;
KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Peptide 1..21
FT /label= Signal_peptide
FT Protein 22..459
FT Misc-difference 214
FT /note= "Mature Human-Asp2(a) deltatm (His)6 protein"
FT /note= "Encoded by CAG"
FT Misc-difference 454
FT /note= "Encoded by CAG"
FT Misc-difference 455
FT /note= "Encoded by CAG"
FT Misc-difference 456
FT /note= "Encoded by CAG"
FT Misc-difference 457
FT /note= "Encoded by CAG"
FT Misc-difference 458
FT /note= "Encoded by CAG"
FT Misc-difference 459
FT /note= "Encoded by CAG"
FT /note= "Encoded by CAG"
XX
PN GB2357767-A.
XX
PD 04-JUN-2001.
XX
PF 22-SEP-2000; 2000GB-00023315.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Bienkowski MJ, Gurney M;
XX
DR WPI: 2001-444208/48.
DR N-PSDB; AAD17879.
XX
PT Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
PS Example 10; Fig 12; 187pp; English.
XX
CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
```

```
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is human Asp 2(a)
CC protein lacking a transmembrane (TM) domain and containing (his)6
CC sequence. This sequence is generated from human Asp 2(a) protein by the
CC deletion of its C-terminal TM domain and addition of hexa-histidine tag
CC at its C-terminus
XX
SQ Sequence 459 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 22 TQHGIRLPURSGIGAPLGL 41
Db 22 TQHGIRLPURSGIGAPLGL 41
|||||
RESULT 69
AAE06873
ID AAE06873 standard; protein; 459 AA.
XX
AC AAE06873;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human-Asp2(a) deltatm (His)6 protein.
XX
KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotrophic;
KM neuroprotective; antisense therapy; Asp2(a) deltatm (His)6 protein;
XX gene therapy.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Region 1..22
FT /note= "Corresponds to N-terminal Human-Asp2(a) deltatm
FT (His)6 protein"
FT Peptide 22..30
FT /label= Signal_peptide
FT Protein 31..459
FT Misc-difference 214
FT /note= "Mature Human-Asp2(a) deltatm (His)6 protein"
FT /note= "Encoded by CAG"
FT Misc-difference 254
FT /note= "Encoded by CAG"
FT Misc-difference 255
FT /note= "Encoded by CAG"
FT Misc-difference 256
FT /note= "Encoded by CAG"
FT Misc-difference 257
FT /note= "Encoded by CAG"
FT Misc-difference 258
FT /note= "Encoded by CAG"
FT Misc-difference 259
FT /note= "Encoded by CAG"
XX
PN W0200150829-A2.
XX
PD 19-JUN-2001.
XX
PR 09-MAY-2001; 2001WO-IB000799.
XX
PR 09-MAY-2001; 2001WO-IB000799.
XX
PA (BIEN/) BIENKOWSKI M J.
```

PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX WPI; 2001-483072/52.
 DR N-PSDB; AAD13035.
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Claim 149; Fig 12; 185pp; English.
 XX
 CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.
 CC Human aspartyl proteases can act as beta-secretase proteases useful for
 CC treating Alzheimer's disease. APP isoforms are useful for identifying
 CC modulators of amyloid-beta peptide production, for use in designing
 CC therapeutics for the treatment and prevention of Alzheimer's disease,
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
 CC and neuronal loss. APP isoforms are also used in methods for identifying
 CC inhibitors and modulators of human Asp2 activity. The invention relates
 CC to a method for identifying agents that modulate the activity of human
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
 CC as a means to screen in cellular assays for the inhibitors of beta- and
 CC gamma-secretase. Hu-APP DNA fragments are useful as probes or primers in
 CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
 CC APP nucleic acids in vitro assays and in Northern and Southern blots.
 CC The present sequence is Human aspartyl protease 2a (Hu-Asp2a) deltaTM
 CC (Hs)6 protein which is obtained by deletion of C-terminal transmembrane
 CC domain and addition of a hexa-Histidine tag at the C-terminal end of Hu-
 CC Asp2a. Human Asp2a has beta-secretase activity
 XX
 SQ Sequence 459 AA;
 Query Match 100.0%; Score 104; DB 1; Length 459;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 22 TQHGIRLPRLSGAGAPLGL 41
 Db 22 TQHGIRLPRLSGAGAPLGL 41
 RESULT 70
 AAE06869 ID AAE06869 standard; protein; 459 AA.
 XX
 AC AAE06869;
 XX
 DT 23-OCT-2001 (first entry)
 DE T7-Caspase-Human-pro-Asp2(a) deltaTM protein.
 XX
 XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
 KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
 KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; notropic;
 KW neuroprotective; antisense therapy; caspase-pro-Asp2(a) deltaTM protein;
 KW gene therapy.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN WO200150829-A2.
 XX
 XX 19-JUL-2001.
 XX
 PD 09-MAY-2001; 2001WO-1B000799.
 XX

PR 09-MAY-2001; 2001WO-1B000799.
 XX
 XX (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX WPI; 2001-483072/52.
 DR N-PSDB; AAD13031.
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Example 9; Fig 7; 185pp; English.
 XX
 CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.
 CC Human aspartyl proteases can act as beta-secretase proteases useful for
 CC treating Alzheimer's disease. APP isoforms are useful for identifying
 CC modulators of amyloid-beta peptide production, for use in designing
 CC therapeutics for the treatment and prevention of Alzheimer's disease,
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
 CC and neuronal loss. APP isoforms are also used in methods for identifying
 CC inhibitors and modulators of human Asp2 activity. The invention relates
 CC to a method for identifying agents that modulate the activity of human
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
 CC as a means to screen in cellular assays for the inhibitors of beta- and
 CC gamma-secretase. Hu-APP DNA fragments are useful as probes or primers in
 CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
 CC APP nucleic acids in vitro assays and in Northern and Southern blots.
 CC The present sequence is T7-Caspase-Human-pro-aspartyl protease 2a (Asp2a)
 CC deltaTM protein which is obtained by the addition of T7 tag and caspase 8
 CC leader sequence at the N-terminal end and deletion of the transmembrane
 CC domain at the C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase
 CC activity
 XX
 SQ Sequence 459 AA;
 Query Match 100.0%; Score 104; DB 1; Length 459;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 22 TQHGIRLPRLSGAGAPLGL 41
 Db 28 TQHGIRLPRLSGAGAPLGL 47
 RESULT 71
 AAE02591 ID AAE02591 standard; protein; 459 AA.
 XX
 AC AAE02591;
 XX
 DT 10-AUG-2001 (first entry)
 DE T7-Caspase-human-pro-Asp-2(a) delta TM protein.
 XX
 XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
 KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
 KW beta-secretase; caspase-Asp-2a delta TM.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN WO200123533-A2.
 XX
 XX 05-APR-2001.
 XX
 PD
 XX

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PF 22-SEP-2000; 2000MO-US026080.
XX
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
PI Gurney M, Bienkowski MJ;
XX
DR WPI; 2001-290516/30.
DR N-PSDB; AAD06749.
XX
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
PS Example 9; Fig 7; 189pp; English.
XX
CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human Aspartyl protease 2a
CC (Asp-2a) caspase delatam protein which is obtained by deleting the
CC transmembrane domain and adding a T7-caspase leader sequence at the N-
CC terminal end. This sequence has beta-secretase protease activity
XX
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPGL 41
DB 28 TOHGIRLPLRSGLGAPGL 47

RESULT 72
AAE02595
ID AAE02595 standard; protein; 459 AA.
XX
AC AAE02595;
XX
DT 10-AUG-2001 (first entry)
XX
DE Human-Asp-2(a) delatam (His)6 protein.
XX
KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
KW beta-secretase; Asp-2a delta TM; histidine tag; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT MISC-difference 214 /note= "Encoded by CAC"
FT MISC-difference 454 /note= "Encoded by CAG"
FT MISC-difference 455 /note= "Encoded by CAG"
FT MISC-difference 456 /note= "Encoded by CAG"
FT MISC-difference 456 /note= "Encoded by CAG"
FT MISC-difference 457 /note= "Encoded by CAG"
FT MISC-difference 457 /note= "Encoded by CAG"
FT MISC-difference 458 /note= "Encoded by CAG"
FT MISC-difference 458 /note= "Encoded by CAG"
FT MISC-difference 459 /note= "Encoded by CAG"
FT MISC-difference 459 /note= "Encoded by CAG"
FT /note= "Encoded by CAG"

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PN MO200123533-A2.
XX
PD 05-APR-2001.
XX
PF 22-SEP-2000; 2000MO-US026080.
XX
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
PI Gurney M, Bienkowski MJ;
XX
DR WPI; 2001-290516/30.
DR N-PSDB; AAD06753.
XX
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
PS Example 10; Fig 12; 189pp; English.
XX
CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human Aspartyl protease 2a
CC (Asp 2a) delatam (His)6 protein which is obtained by deleting the
CC transmembrane domain and adding a histidine tag at the C-terminal end.
CC This sequence has beta-secretase protease activity
XX
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPGL 41
DB 22 TOHGIRLPLRSGLGAPGL 41

RESULT 73
AAU06617
ID AAU06617 standard; protein; 459 AA.
XX
AC AAU06617;
XX
DT 24-OCT-2001 (first entry)
XX
DE Human-pro-Asp 2(a) delta TM (His)6.
XX
KW Human; Aspartyl protease; beta-secretase; neotropic; ASP2;
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM (His)6; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT PEPTIDE 1..21 /label= Signal_peptide
FT PROTEIN 22..459 /label= Mature_human_pro_Asp_2(a)_delta_TM_(His)6
FT MISC-difference 214 /note= "Encoded by CAC"
FT MISC-difference 454..459 /note= "Encoded by CAGCAGCAGCAGCAG"
FT MISC-difference 454..459 /note= "Encoded by CAGCAGCAGCAGCAG"
FT Region /label= His tag
FT /note= "Nickel binding region to aid purification"

```


XX WO200149098-A2.
 PN 12-JUL-2001.
 XX 09-MAY-2001; 2001WO-IB000798.
 XX 09-MAY-2001; 2001WO-IB000798.
 XX (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 PI WPI; 2001-502549/55.
 XX N-PSDB; AAS11531.
 DR Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX Claim 149; Fig 12; 185pp; English.
 PS The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl termini of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence is Human-pro- Asp 2(a) delta TM
 CC (Hts)6 protein, which lacks the C-terminal transmembrane domain and has a
 CC His tag to aid purification
 XX Sequence 459 AA;
 SQ Query Match 100.0%; Score 104; DB 1; Length 459;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DE Human T7-Caspase-Human-pro-Asp 2(a) delta TM fusion protein.
 XX Human, Aspartyl protease; beta-secretase; neurotropic; Asp2;
 KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KM amyloid-beta; Abeta; T7-Caspase-Human-pro-Asp 2(a) delta TM.
 XX Homo sapiens.
 OS Synthetic.
 XX Key
 FH Location/Qualifiers
 FT Peptide
 FT 1..14
 FT /label= T7 tag
 FT /note= "Aids purification of the protein when expressed
 FT in E.coli"
 FT 15..28
 FT /label= Signal_peptide
 FT /note= "Caspase leader sequence"
 FT 29..459
 FT /label= Mature_Asp_2(a)
 XX WO200149098-A2.
 PN 12-JUL-2001.
 XX 09-MAY-2001; 2001WO-IB000798.
 XX 09-MAY-2001; 2001WO-IB000798.
 XX (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 PI WPI; 2001-502549/55.
 XX N-PSDB; AAS11527.
 DR Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX Example 9; Fig 7; 185pp; English.
 PS The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl termini of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence is the T7-Caspase-Human-pro-Asp
 CC 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid
 CC purification when expressed in E. coli and the Caspase leader peptide
 CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key

```

XX Sequence 459 AA;
SQ
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPNLSGIGAPLGL 41
DB 28 TQHGIRLPNLSGIGAPLGL 47

RESULT 75
ABB78600
ID ABB78600 standard; protein; 459 AA.
XX
AC ABB78600;
XX
DT 16-JUL-2002 (first entry)
XX
DE 17-caspase-human-pro-Asp-2(a)deltatm protein sequence SEQ ID NO:24.
XX
KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
XX amyloid precursor protein; App.
OS Homo sapiens.
XX
PN GB2367060-A.
XX
PD 27-MAR-2002.
XX
PF 29-OCT-2001; 2001GB-00025934.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX
PA (PHMA ) PHARMACIA & UPJOHN CO.
XX
PI Bienkowski MJ, Gurney M;
XX
DR WPI; 2002-397167/43.
DR N-PSDB; ABL52467.
XX
PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
PS Example 9; Fig 7; 182pp; English.
XX
CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III') comprising a sequence that
CC hybridises under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC comprising (III) or (III'); and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while

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CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence represents human T7-caspase-human-pro-Asp-2(a)deltatm, which is
CC given in an example from the present invention
XX
SQ Sequence 459 AA;
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPNLSGIGAPLGL 41
DB 28 TQHGIRLPNLSGIGAPLGL 47

RESULT 76
ABB78604
ID ABB78604 standard; protein; 459 AA.
XX
AC ABB78604;
XX
DT 16-JUL-2002 (first entry)
XX
DE Human Asp-2(a)deltatm(His)6 protein sequence SEQ ID NO:32.
XX
KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
XX Chromosome 11q23.3-24.1.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT MISC-difference 214 /note= "encoded by CAC"
FT MISC-difference 454 /note= "encoded by CAG"
FT MISC-difference 455 /note= "encoded by CAG"
FT MISC-difference 456 /note= "encoded by CAG"
FT MISC-difference 457 /note= "encoded by CAG"
FT MISC-difference 458 /note= "encoded by CAG"
FT MISC-difference 459 /note= "encoded by CAG"
FT MISC-difference 459 /note= "encoded by CAG"
FT MISC-difference 459 /note= "encoded by CAG"
XX
PN GB2367060-A.
XX
PD 27-MAR-2002.
XX
PF 29-OCT-2001; 2001GB-00025934.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX
PA (PHMA ) PHARMACIA & UPJOHN CO.
XX
PI Bienkowski MJ, Gurney M;
XX
DR WPI; 2002-397167/43.
DR N-PSDB; ABL52471.
XX
PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
PS Example 10; Fig 12; 182pp; English.
XX
CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,

```

CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC AB52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III') comprising a sequence that
CC hybridises under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV)
CC comprising (III) or (III'); and (5) a host cell (V) transformed or
CC transduced with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence represents human Asp-2(a)deltaTM(His)6, which is given in an
CC example from the present invention
XX

SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLSGLGAPLGL 41
Db 22 TQHGIRLPRLSGLGAPLGL 41

RESULT 77
ID ADC81579 standard; protein: 459 AA.
XX
AC ADC81579;
XX
DT 01-JAN-2004 (first entry)
XX
DE BACE construct Asp2-2L-TM-His6 amino acid sequence SEQ ID NO:24.
XX
XX human; BACE; modification: Pro33lys; pro-enzyme.
XX
OS Synthetic.
XX
OS Homo sapiens.
XX
PN WO2003072733-A2.
XX
PD 04-SEP-2003.
XX
PF 21-FEB-2003; 2003WO-US005508.
XX
PR 21-FEB-2002; 2002US-0358651P.
XX
PA (PHAA) PHARMACIA & UPJOHN CO.
XX
PI Chou K, Howe JW;
XX
DR WPI; 2003-712719/67.
XX
XX BACE polypeptides having Pro33lys modification, useful in determining
XX possible mutations, which will inhibit enzyme activity, and in
XX determining potential active site for target molecules.
XX
PS Example 4; SEQ ID NO 24; 38bp; English.
XX
XX The present invention describes an isolated polypeptide (I) comprising or
XX consisting of a fully defined sequence of 432 amino acids (see ADC81561),
XX and comprising human BACE having the modification Pro33lys. Also
XX described: (1) a composition comprising an active human BACE enzyme

CC comprising the pro-enzyme sequence of BACE having the modification
CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding
CC (1) (3) an isolated polynucleotide consisting or comprising of
CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an
CC expression vector comprising the polynucleotide of (2), or a
CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
CC expression vector can produce the Pro33lys-BACE polypeptide when present
CC in a competent host cell, when cultured under conditions that allow
CC production; (5) a recombinant host cell comprising the expression vector;
CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
CC polypeptide having Pro33lys modification may be used in determining
CC possible mutations, which will inhibit enzyme activity, and in
CC determining potential active site for target molecules. The vector
CC comprising the BACE polynucleotide is useful for producing recombinant
CC BACE polypeptides having Pro33lys modification. The present sequence
CC represents a BACE construct Asp2-2L-TM-His6 amino acid sequence, which is
CC used in an example from the present invention.
XX

SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLSGLGAPLGL 41
Db 22 TQHGIRLPRLSGLGAPLGL 41

RESULT 78
ID ADJ94344 standard; protein: 459 AA.
XX
AC ADJ94344;
XX
DT 03-JUN-2004 (first entry)
XX
DE Human-pro-Asp-2(a)deltaTM(His)6.
XX
XX Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
XX neurotropic; neuroprotective; amyloid beta; mutant; mutuin.
XX
OS Homo sapiens.
XX
OS Synthetic.
XX
PN US6706485-B1.
XX
PD 16-MAR-2004.
XX
PF 12-APR-2000; 2000US-00548376.
XX
PR 24-SEP-1998; 98US-0101594P.
XX
PR 23-SEP-1999; 99US-00404133.
XX
PR 23-SEP-1999; 99US-0155493P.
XX
PR 23-SEP-1999; 99WO-US020881.
XX
PR 13-OCT-1999; 99US-00416501.
XX
PA (PHAA) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-236722/22.
XX
XX N-PSDB; ADJ94343.
XX
XX Identifying agents that modulate activity of Asp2 aspartyl protease
XX useful for treating or preventing Alzheimer's disease involves comparing
XX APP processing activity of protease in presence and absence of test
XX agent.
XX
PS Example 10; SEQ ID NO 32; 109bp; English.
XX
XX The invention relates to identifying agents that modulate activity of

CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a). mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence represents an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.

CC Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPVGL 41
 |||||
 DB 22 TQHGIRLPLRSGLGAPVGL 41

RESULT 79

ADJ94336
 ID ADJ94336 standard; protein; 459 AA.

AC ADJ94336;

DT 03-JUN-2004 (first entry)

DE Human T7-Caspase-human-pro-Asp-2(a)deltaTM.

KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 KW neurotrophic; neuroprotective; amyloid beta; mutant; muteln.

OS Homo sapiens.

OS Synthetic.

PN US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155483P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R,

DR WPI, 2004-236722/22.
 DR N-PSDB; ADJ94335.
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.

PS Example 9; SEQ ID NO 24; 109pp; English.

XX The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a). mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence represents an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.

SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPVGL 41
 |||||
 DB 28 TQHGIRLPLRSGLGAPVGL 47

RESULT 80

ADJ50432
 ID ADJ50432 standard; protein; 459 AA.

AC ADJ50432;

DT 29-JUL-2004 (first entry)

DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric protein.

KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
 KW Alzheimer's disease; gene therapy; human; chimeric; caspase.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX US6737510-B1.

XX US6737510-B1.

PI 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

```
XX 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR N-PSDB; ADO50431.
DR
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 9; SEQ ID NO 24; 108pp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is used
CC Caspase-human-pro-Asp-2(a)deltaTM chimeric protein. This sequence is used
CC to illustrate the method of the invention.
XX
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
DB 28 TONGIRLPLRSGLGAPLGL 47

RESULT 81
AD050440
ID AD050440 standard; protein; 459 AA.
XX
AC AD050440;
XX
DT 29-JUL-2004 (first entry)
XX
DE Human Asp-2(a)deltaTM(His)6 protein.
XX
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human.
XX
OS Homo sapiens.
OS Synthetic.
XX
XX
FH Key Location/Qualifiers
FT Misc-difference 214
FT Misc-difference /note= "Encoded by CAC"
FT Misc-difference 454
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 455
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 456
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 457
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 458
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 459
FT Misc-difference /note= "Encoded by CAG"
XX
```

```
FN US6737510-B1.
XX
XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR N-PSDB; ADO50439.
DR
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 10; SEQ ID NO 32; 108pp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is human
CC Asp-2(a)deltaTM(His)6 protein. This sequence is used to illustrate the
CC method of the invention.
XX
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
DB 22 TONGIRLPLRSGLGAPLGL 41

RESULT 82
ADR75345
ID ADR75345 standard; protein; 459 AA.
XX
AC ADR75345;
XX
DT 18-NOV-2004 (first entry)
XX
DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric protein.
XX
KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KW chromosome identification; Alzheimer's disease; human; caspase; chimeric.
XX
OS Homo sapiens.
OS Chimeric.
OS Unidentified.
XX
XX US2004166507-A1.
XX
XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 13-OCT-1999; 99US-00416901.
```

```

XX (GURN/) GURNEY M E.
PA (BIEN/) BIENKOWAKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2004-624916/60.
DR N-PSDB; ADR75344.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
XX activity of aspartyl protease.
XX
XX Example 9; SEQ ID NO 24; 107pp; English.
PS
XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridize with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying gene responsible for causing diseases. It is
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX present sequence is the human T7-Caspase-Human-pro-Asp-2(a)deltaTM
XX chimeric protein. This sequence is used to illustrate the method of the
XX invention.
XX
XX Sequence 459 AA;
SQ
XX
XX Query Match 100.0%; Score 104; DB 1; Length 459;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 28 TQHGIRLPRLRSGLGAPLGL 47

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FT /note= "Encoded by CAG"
FT Misc-difference 459 /note= "Encoded by CAG"
FT
XX US2004166507-A1.
XX
XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 13-OCT-1999; 99US-00416901.
XX
XX (GURN/) GURNEY M E.
PA (BIEN/) BIENKOWAKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2004-624916/60.
DR N-PSDB; ADR75352.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
XX activity of aspartyl protease.
XX
XX Example 10; SEQ ID NO 32; 107pp; English.
PS
XX
XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridize with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying gene responsible for causing diseases. It is
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX present sequence is the human Asp-2(a)deltaTM(His)6 protein. This
XX sequence is used to illustrate the method of the invention.
XX
XX Sequence 459 AA;
SQ
XX
XX Query Match 100.0%; Score 104; DB 1; Length 459;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

```

PV	XX	MO200047618-A2.
PX	XX	
PD	XX	17-AUG-2000.
PE	XX	
PF	XX	10-FEB-2000; 2000WO-US003819.
PG	XX	
PH	XX	10-FEB-1999; 99US-0119571P.
PI	XX	15-JUN-1999; 99US-0139172P.
PJ	PA	(ELAN-) ELAN PHARM INC.
PK	XX	
PL	PI	Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M;
PM	PI	Sinha S, Tateanu G, Tung J, Wang S, Mcconlogue L;
PN	DR	WPI; 2000-533011/48.
PO	XX	
PP	PT	Purified beta-secretase protein used in assays to discover inhibitors
PQ	PT	which can be used for the treatment of amyloidogenic diseases e.g.
PR	PT	Alzheimer's disease.
PS	XX	
PT	PS	Claim 55; Fig 3A; 121pp; English.
PV	CC	The specification describes a beta-secretase enzyme. The enzyme cleaves
PX	CC	beta-amyloid precursor protein to produce beta-amyloid peptide. This
PY	CC	enzyme is therefore implicated in the production of amyloid plaque
PZ	CC	components which accumulate in the brains of individuals afflicted with
QA	CC	Alzheimer's disease. Inhibitors of beta-secretase are administered to a
QB	CC	mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-
QC	CC	like pathology to test if they maintain or improve cognitive ability or
QD	CC	reduce the plaque burden. The compounds are used for the treatment of
QE	CC	amyloidogenic diseases e.g. Alzheimer's disease. The present sequence
QF	CC	represents a human beta-secretase enzyme fragment
QG	XX	
QH	SQ	Sequence 460 AA;
QI		
QJ		
QK		
QL		
QM		
QN		
QO		
QP		
QQ		
QR		
QS		
QT		
QU		
QV		
QW		
QX		
QY		
QZ		
RA		
RB		
RC		
RD		
RE		
RF		
RG		
RH		
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RU		
RV		
RW		
RX		
RY		
RZ		
SA		
SB		
SC		
SD		
SE		
SF		
SG		
SH		
SI		
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WZ		

DR	N-PSDB; ADJ57788.
XX	
PT	New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT	preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT	syndrome.
XX	
PS	
XX	Claim 10; SEQ ID NO 18; 145bp; English.
XX	
CC	The present invention relates to a beta site APP cleaving enzyme (BACE)
CC	protein. The compound or the composition is useful in medicine and the
CC	BACE crystal structure is useful for drug discovery. The BACE protein,
CC	compounds, pharmaceutical compositions, medicament, drug or other
CC	composition comprising the compound is useful for treating or preventing
CC	Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC	present sequence represents the DNA sequence for a BACE protein.
XX	
SQ	Sequence 460 AA;
Query Match	100.0%; Score 104; DB 1; Length 460;
Best Local Similarity	100.0%; Pred. No. 33;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY	22 TQHGIRLP LRSGLGAPLGL 41
DB	24 TQHGIRLP LRSGLGAPLGL 43
RESULT 86	
ADJ57787	
ID	ADJ57787 standard; protein; 461 AA.
XX	
AC	ADJ57787;
XX	
DT	06-MAY-2004 (first entry)
XX	
DE	BACE N-Q R57K protein.
XX	
KW	beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX	Alzheimer's disease.
XX	
OS	Synthetic.
XX	
PN	WO2004011641-A2.
XX	
PD	05-FEB-2004.
XX	
XX	
PF	25-JUL-2003; 2003WO-GB003200.
XX	
PR	26-JUL-2002; 2002US-0398681P.
XX	
PA	(ASTE-) ASTEX TECHNOLOGY LTD.
XX	
PI	Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX	WPI; 2004-169242/16.
DR	N-PSDB; ADJ57786.
XX	
PT	New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT	preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX	syndrome.
XX	
PS	
XX	Claim 10; SEQ ID NO 16; 145bp; English.
XX	
CC	The present invention relates to a beta site APP cleaving enzyme (BACE)
CC	protein. The compound or the composition is useful in medicine and the
CC	BACE crystal structure is useful for drug discovery. The BACE protein,
CC	compounds, pharmaceutical compositions, medicament, drug or other
CC	composition comprising the compound is useful for treating or preventing
CC	Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC	present sequence represents the DNA sequence for a BACE protein.
XX	
SQ	Sequence 461 AA;

Query Match 100.0%; Score 104; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 24 TQHGIRLPURSGLGAPLGL 43

RESULT 87

ADJ57775
ID ADJ57775 standard; protein; 461 AA.

XX ADJ57775;

DT 06-MAY-2004 (first entry)

DE BACE N-Q protein.

KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease.

OS Synthetic.

FN WO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI, 2004-169242/16.

DR N-PSDB; ADJ57774.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.

PS Disclosure; SEQ ID NO 4; 145pp; English.

CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.

XX Sequence 461 AA;

Query Match 100.0%; Score 104; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 24 TQHGIRLPURSGLGAPLGL 43

RESULT 88

ADJ57783
ID ADJ57783 standard; protein; 461 AA.

XX ADJ57783;

DT 06-MAY-2004 (first entry)

DE BACE N-Q R56K57K protein.

XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease.

OS Synthetic.

FN WO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI, 2004-169242/16.

DR N-PSDB; ADJ57782.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.

PS Claim 10; SEQ ID NO 12; 145pp; English.

CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.

XX Sequence 461 AA;

Query Match 100.0%; Score 104; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 24 TQHGIRLPURSGLGAPLGL 43

RESULT 89

AAV88426
ID AAV88426 standard; protein; 476 AA.

AC AAV88426;

DT 03-AUG-2000 (first entry)

DE Human aspartyl protease 2 (b) (Asp2) amino acid sequence.

KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
KW Alzheimer's disease; beta secretase site.

OS Homo sapiens.

FN WO200017369-A2.

PD 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Van R;

DR WPI: 2000-303209/26.
 DR N-PSDB; AAA15663.
 XX
 PT New enzyme designated human aspartase useful in research into Alzheimer's
 PT Disease is capable of cleaving amyloid protein precursor at the beta
 PT secretase site to produce amyloid beta peptide.
 XX
 PS Claim 51; Fig 3; 183pp; English.
 XX
 CC This sequence represents the human aspartyl protease 2 (Asp2) amino acid
 CC sequence. The invention relates to a protease (e.g. Asp2) capable of
 CC cleaving the beta secretase site of amyloid precursor protein (APP). The
 CC protease contains a sequence encoding the amino acid sequence DTG and a
 CC sequence encoding DSG or DTG separated by 100-300 amino acids. When
 CC mutated the APP gene causes an autosomal dominant form of Alzheimer's
 CC disease. APP localises to the cell surface membrane and have a single C-
 CC terminal transmembrane domain. Proteolytic processing of APP produces the
 CC amyloid beta protein, which is possibly very important in Alzheimer's
 CC disease. The invention includes a nucleotide sequence encoding the
 CC protease, a vector containing the nucleotide sequence, and a cell line
 CC comprising the vector. Methods for screening for inhibitors of beta
 CC secretase activity are also given in the invention. The human aspartase
 CC protein and nucleotide sequences and the methods for identifying
 CC inhibitors of the protease, are useful in the treatment of and research
 CC in to Alzheimer's disease
 XX
 SQ Sequence 476 AA;
 Query Match 100.0%; Score 104; DB 1; Length 476;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPNRSGLGAPLGL 41
 Db 22 TQHGIRLPNRSGLGAPLGL 41
 RESULT 90
 AAU07203 standard; protein; 476 AA.
 XX
 AC AAU07203;
 XX
 DT 09-SEP-2004 (revised)
 DT 24-OCT-2001 (first entry)
 XX
 DE Human aspartyl protease 2b (Asp-2b).
 XX
 KM Human; aspartyl protease 1; Asp-1; neuroprotective;
 KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;
 KM beta-secretase; Alzheimer's disease.
 XX
 OS Homo sapiens.
 OS Unidentified.
 XX
 FH Key Location/Qualifiers
 FH Peptide 1..21
 FT /note= "Signal peptide"
 FT Misc-difference 22..45
 FT /note= "Pre-propeptide"
 FT Misc-difference 46..57
 FT /note= "Propeptide"
 FT Protein 58..476
 FT /note= "Mature Aspartyl protease-2a"
 FT Region 395..429
 FT /note= "Alpha helical spacer region"
 FT Domain 430..452
 FT /note= "Transmembrane domain"
 FT Domain 453..476
 FT /note= "Cytoplasmic domain"
 XX
 PN WO200149097-A2.
 XX

PD 12-JUL-2001.
 XX
 PF 09-MAY-2001; 2001WO-IB000797.
 XX
 PR 09-MAY-2001; 2001WO-IB000797.
 XX
 PA (BIEN/) BIENKOWSKI M J.
 PA (GURNEY/) GURNEY M E.
 PA (HEINRICH/) HEINRICHSON R L.
 PA (PARODI/) PARODI L A.
 PA (YANR/) YAN R.
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 DR WPI: 2001-502546/55.
 DR N-PSDB; AAS11703.
 XX
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Claim 55; Fig 3; 183pp; English.
 XX
 CC The invention relates to a novel purified polypeptide comprising a
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl terminus of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC; and for reducing cellular production of amyloid beta (A-beta) from APP.
 CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta
 CC (A-beta) peptide production, for use in designing therapeutics for the
 CC treatment or prevention of Alzheimer's disease. Probes and primers
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The
 CC present sequence represents the amino acid sequence of human Asp-2b used
 CC in the methods of the invention
 CC
 CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
 CC
 SQ Sequence 476 AA;
 Query Match 100.0%; Score 104; DB 1; Length 476;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPNRSGLGAPLGL 41
 Db 22 TQHGIRLPNRSGLGAPLGL 41
 RESULT 91
 AA010630 standard; protein; 476 AA.
 XX
 AC AA010630;
 XX
 DT 10-DEC-2001 (first entry)
 DT
 XX
 DE Human aspartyl protease 2 (b) [hu-Asp2 (b)] protein.
 XX
 KM Human; aspartyl protease 2 (b); Asp2 (b); amyloid precursor protein; APP;
 KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
 KM amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;
 KM chromosome 11q23.3-24.1.
 KW

```
XX OS Homo sapiens.
XX FH Key
XX FT Peptide
XX FT Protein
XX FT Region
XX FT Domain
XX FT Domain
XX FT Domain
XX PN GB235767-A.
XX PD 04-JUL-2001.
XX PF 22-SEP-2000; 2000GB-00023315.
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99WC-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX PR 06-DEC-1999; 99US-0169232P.
XX PA (PHAA ) PHARMACIA & UPJOHN CO.
XX PI Bienkowski MJ, Gurney M;
XX DR MPI; 2001-444208/48.
XX DR N-PSDB; AAD17866.
XX PT Polypeptide comprising fragments of human aspartyl protease with amyloid
XX PT precursor protein processing activity and alpha-secretase activity, for
XX PT identifying modulators useful in treating Alzheimer's disease.
XX PS Example 2; Fig 3; 187pp; English.
XX CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX CC proteins which lack transmembrane domain or amino terminal domain or
XX CC cytoplasmic domain and retain alpha-secretase activity and amyloid
XX CC protein precursor (APP) processing activity. The proteins of the
XX CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX CC are useful for treating Alzheimer's disease (AD) which causes progressive
XX CC dementia with consequent formation of amyloid plaques, neurofibrillary
XX CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX CC with the substrate under acidic conditions and determining the level of
XX CC hu-Asp1 proteolytic activity. The present sequence is short form of human
XX CC Asp2 protein, designated as Asp2(b). Asp2 gene is localised on chromosome
XX CC 11q23.3-24.1
XX SQ Sequence 476 AA;
XX Query Match 100.0%; Score 104; DB 1; Length 476;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TOHGIRLPURSGGAPLGL 41
DB 22 TOHGIRLPURSGGAPLGL 41
RESULT 92
AAE06860
ID AAE06860 standard; protein; 476 AA.
AC AAE06860;
XX
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```
DT 23-OCT-2001 (first entry)
XX DE Human aspartyl protease 2b (Hu-Asp2b) protein.
XX KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
XX KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
XX KW neuroprotective; antisense therapy; gene therapy;
XX KW chromosome 11q23.3-24.1.
XX OS Homo sapiens.
XX FH Key
XX FT Peptide
XX FT Protein
XX FT Region
XX FT Domain
XX FT Domain
XX PN WO200150829-A2.
XX PD 19-JUL-2001.
XX PF 09-MAY-2001; 2001WO-IB000799.
XX PR 09-MAY-2001; 2001WO-IB000799.
XX PR 09-MAY-2001; 2001WO-IB000799.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (GURN/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX DR MPI; 2001-483072/52.
XX DR N-PSDB; AAD13022.
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX PS Claim 55; Fig 3; 185pp; English.
XX CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX CC precursor protein (APP) isoforms and their corresponding DNA molecules.
XX CC Human aspartyl proteases can act as beta-secretase proteases useful for
XX CC treating Alzheimer's disease. APP isoforms are useful for identifying
XX CC modulators of amyloid-beta peptide production, for use in designing
XX CC therapeutics for the treatment and prevention of Alzheimer's disease,
XX CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX CC and neuronal loss. APP isoforms are also used in methods for identifying
XX CC inhibitors and modulators of human Asp2 activity. The invention relates
XX CC to a method for identifying agents that modulate the activity of human
XX CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX CC as a means to screen in cellular assays for the inhibitors of beta- and
XX CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX CC The present sequence is human aspartyl protease 2 (Hu-Asp2), a 'short'
XX CC form designated as (Hu-Asp2b). Hu-Asp 2 gene is localised on chromosome
XX CC 11q23.3-24.1
XX SQ Sequence 476 AA;
XX Query Match 100.0%; Score 104; DB 1; Length 476;
XX Best Local Similarity 100.0%; Pred. No. 33;
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Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPKRGGLGAPLGL 41
Db 22 TQHGIRLPKRGGLGAPLGL 41
RESULT 93
AAE02582
ID AAE02582 standard; protein; 476 AA.
XX
AC AAE02582;
XX
DT 10-AUG-2001 (first entry)
XX
DE Human aspartyl protease 2b (Asp 2b).
XX
KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; antialzheimer's; aspartyl protease 2b; Asp 2b;
KW beta-secretase; chromosome 11q23.3-24.1.
XX
OS Homo sapiens.
XX
FH Key
FH Peptide 1. .21
FT /label= Signal_peptide
FT Peptide 22. .45
FT /label= Asp_2b_prepropeptide
FT Peptide 46. .57
FT /label= Asp_2b_propeptide
FT Protein 58. .476
FT /label= Mature_human_Asp_2b_protein
FT Active-site 93. .95
FT /label= Active_site_1
FT Active-site 264. .266
FT /label= Active_site_2
FT Region 395. .429
FT /label= Alpha_helical_spacer
FT Domain 430. .452
FT /label= Transmembrane_domain
FT Domain 453. .476
FT /label= Cytoplasmic_domain
XX
PN WO200123533-A2.
XX
PD 05-APR-2001.
XX
PF 22-SEP-2000; 2000WO-US026080.
XX
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-290516/30.
DR N-PSDB; AAD06740.
XX
XX
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
PS Example 2; Fig 3; 189pp; English.
XX
CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human aspartyl protease 2b
CC (Asp 2b). Asp 2b has beta-secretase protease activity. Asp2 gene is
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CC located on chromosome 11q23.3-24.1
XX
SQ Sequence 476 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPKRGGLGAPLGL 41
Db 22 TQHGIRLPKRGGLGAPLGL 41
RESULT 94
AAU06604
ID AAU06604 standard; protein; 476 AA.
XX
AC AAU06604;
XX
DT 09-SEP-2004 (revised)
DT 24-OCT-2001 (first entry)
XX
DE Human Aspartyl protease 2(b), Asp2(b).
XX
KW Human; Aspartyl protease; Asp2(b); beta-secretase; neurotrophic;
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW amyloid-beta; Abeta.
XX
OS Homo sapiens.
OS Unidentified.
XX
FH Key
FH Peptide 1. .21
FT /label= Signal peptide
FT Peptide 22. .45
FT /label= Pre_pro_peptide
FT Peptide 46. .57
FT /label= Pro_peptide
FT Protein 57. .476
FT /label= Mature_Asp2(b)
FT Region 395. .429
FT /label= Alpha_helical_spacer_region
FT Domain 430. .452
FT /note = Transmembrane domain
FT Domain 453. .476
FT /note = Cytoplasmic domain
XX
PN WO200149098-A2.
XX
PD 12-JUL-2001.
XX
PF 09-MAY-2001; 2001WO-IB000798.
XX
PR 09-MAY-2001; 2001WO-IB000798.
XX
XX
PA (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (VANR/) VAN R.
XX
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Van R;
XX
XX WPI; 2001-502549/55.
DR N-PSDB; AAS11518.
XX
XX
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
PS Claim 55; Fig 3; 185pp; English.
XX
```

CC	The invention relates to a purified polypeptide comprising a fragment of
CC	mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
CC	transmembrane domain and the Asp2 protein, and where the polypeptide and
CC	the fragment retain the beta-secretase activity of the mammalian Asp2
CC	protein. The invention also details polynucleotides for the Asp proteins
CC	and vectors expressing them, and a polypeptide (isoform of amyloid
CC	protein precursor (APP)) comprising the amino acid sequence of an APP or
CC	its fragment containing an APP cleavage site recognizable by a mammalian
CC	beta-secretase, and further comprising two lysine residues at the
CC	carboxyl terminus of the amino acid sequence of the mammalian APP or
CC	fragment. Also included in the invention are methods of identifying
CC	modulators or inhibitors of the invention and modulators of Asp2 are
CC	useful for treating Alzheimer's disease. APP is useful in methods for
CC	identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC	beta (A-beta) peptide production. APP is also useful in designing
CC	therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC	comprising the App-Sw-beta-secretase peptide sequence (NLDA), which is
CC	associated with increased levels of beta processing is useful for
CC	relating the Alzheimer's research. The expression vector is useful for
CC	recombinantly expressing APP. Nucleic acids that hybridize to Asp
CC	oligonucleotides are useful as probes or primers. The probes are useful
CC	for detecting Hu-App nucleic acids in vitro assays and in Northern and
CC	southern blots. The present sequence is human Asp2(b)
CC	
CC	Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
CC	
XX	Sequence 476 AA;
SQ	
Query Match	100.0%; Score 104; DB 1; Length 476;
Best Local Similarity	100.0%; Pred. No. 33;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0.
OY	22 TQHGRLPLRSGLGAPLGL 41
DB	22 TQHGRLPLRSGLGAPLGL 41
RESULT 95	
ABB06410	
ID	ABB06410 standard; protein; 476 AA.
XX	
AC	ABB06410;
XX	
DT	31-MAY-2002 (first entry)
XX	
DE	Human aspartyl protease protein sequence SEQ ID NO:4.
XX	
KW	Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;
KW	aspartyl protease; neuroprotective; nootropic; beta-secretase inhibitor;
KW	Alzheimer's disease.
XX	
OS	Homo sapiens.
XX	
PN	WO200206306-A2.
XX	
PD	24-JAN-2002.
XX	
PP	19-JUL-2001; 2001WO-US023035.
XX	
PR	19-JUL-2000; 2000US-0219795P.
XX	
PR	12-MAR-2001; 2001US-0275251P.
XX	
PA	(PHAA) PHARMACIA & UPJOHN CO.
PI	Yan R, Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ,
DR	Heinrikson RL;
XX	WPI: 2002-216995/27.
DR	N-Psdb; ABL49915.
XX	
PT	Novel substrates for human aspartyl protease useful for identifying
PT	modulators of beta secretase activity of aspartyl protease for treating
PT	Alzheimer's disease.

CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
XX
SQ Sequence 476 AA;

Query Match	100.0%	Score 104	DB 1	Length 476
Best Local Similarity	100.0%	Pred. No. 33		
Matches	20	Conservative	0	Indels 0
				Gaps 0

OY	22	TQHGIRLPRLSGLGAPLGL	41
Dd	22	TQHGIRLPRLSGLGAPLGL	41

RESULT 95
ABB06410
ID ABB06410 standard; protein; 476 AA.
vv

novel substrates for human aspartyl protease useful for identifying modulators of beta secretase activity of aspartyl protease for treating Alzheimer's disease.

XX Claim 63; Page 120-121; 188pp; English.

Query Match	100.0%	Score 104;	DB 1;	Length 476;
Best Local Similarity	100.0%;	Pred. No. 33;		
Matches 20; Conservative	0;	Mismatches	0;	Gaps 0

QY 22 TQHGIRLPRLSRGLGAPLGL 41
Dd 22 TQHGIRLPRLSRGLGAPLGL 41

RESULT 96
ABB06120
ID ABB06120 standard; protein; 476 AA.
vv

DT	10-MAY-2002	(first entry)
XX		
DE	Human NS protein sequence	SEQ ID NO:212

KM Human, osteoarthritic, osteoporathic, gynaecological, neuropsychiatric, anti-HIV,
KM antineoplastic, antiarthritic, antipsoriatic, ophthalmological, anti-HIV,
KM vasotropic, antiarteriosclerotic, antiinflammatory, dermatological,
KM anorectic, muscular, antileptile, cardiovascular, anticoagulant,
KM antidiabetic, hypotension, antiaesthetic, immunomodulator, cardiac,
KM anticonvulsant, antidiabetic, tranquilliser, antidepressant, antiepileptic,
KM gastroenteric, vitaminic, antitumor, cerebroprotective, nootropic,
KM contraceptive, vaccine, gene therapy, cancer, osteoporosis, dystonia,
KM endometriosis, degenerative disease, multiple sclerosis, psoriasis,
KM rheumatoid arthritis, cataract, xerostomia, atherosclerosis, glaucoma,
KM inflammation, skin disorder, obesity, muscular dystrophy, AIDS,
KM infertility, cardiovascular disease, coagulation disease, hypertension,
KM ischaemia, asthma, immune disease, epilepsy, angina, neurodegeneration,
KM diabetes, anxiety, depression, schizophrenia, viral disease, stroke,
KM gastric ulcer, Alzheimer's disease.

OS	Homo sapiens.
XX	
PN	MO200206315-A2.
PN	
PD	24-JAN-2002.
XX	
XX	
XX	
PF	17-JUL-2001, 2001MO-11000653.
XX	
PR	18-JUL-2000, 2000IL-00137345.
PR	15-DEC-2000, 2000IL-00140354.
XX	
XX	(COMP-) COMPUGEN LTD.
XX	
XX	
PI	Mintz L, Freilich S, Bernstein J,
DR	WPI, 2002-155037/20.
XX	N-PSDB; ABL39774.

PT One hundred and twenty eight novel nucleic acid sequences, useful for
 PT treating and diagnosing e.g. cancer, asthma and Alzheimer's.
 PS Claim 6; Page 246-248; 290pp; English.
 XX
 CC ABL39691 to ABL39818 represent novel human nucleic acid sequences
 CC encoding the proteins given in ABB06037 to ABB06164. The novel sequences
 CC (NS) can have cytoprotective, osteoprotective, gynaecological, neuroprotective,
 CC antineumatic, antirheumatic, antipsoriatic, ophthalmological, virucide,
 CC vasoconstrictive, antihypertensive, antiinflammatory, dermatological,
 CC anorectic, muscular, anti-HIV, antifertility, cardiovascular,
 CC anticoagulant, antifibrinolytic, hypotension, antidiabetic, cardiac,
 CC immunomodulator, anticonvulsant, antidiabetic, tranquiliser, anticancer,
 CC antidepressant, gastrointestinal, neuroleptic, cerebroprotective,
 CC neurotropic and contraceptive activities. The NS can be used in vaccines,
 CC gene therapy and antitense therapy. Nucleic acids, expression vectors and
 CC antibodies from the present invention can be used for treating and
 CC diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative
 CC diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis,
 CC cataracts, stenosis, atherosclerosis, inflammation, skin disorders,
 CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular
 CC disease, coagulation disease, ischaemia, hypertension, asthma, immune
 CC depression, schizophrenia, viral disease, gastric ulcers, stroke,
 CC Alzheimer's disease and as a contraceptive
 CC
 XX Sequence 476 AA;
 SQ
 Query Match 100.0%; Score 104; DB 1; Length 476;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLSGGCGAPLGL 41
 Db 22 TQHGIRLPRLSGGCGAPLGL 41
 RESULT 97
 ABB78591 standard; protein; 476 AA.
 XX ID ABB78591
 XX AC ABB78591;
 XX DT 16-JUL-2002 (first entry)
 XX DE Human Asp-2(b) protein sequence SEQ ID NO:6.
 XX KW Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;
 KM proteolytic; chromosome 11q23.3-24.1.
 XX OS Homo sapiens.
 XX GN GB2367060-A.
 XX PN 27-MAR-2002.
 XX PD 29-OCT-2001; 2001GB-00025934.
 XX PF 23-SEP-1999; 99US-00404133.
 XX PR 23-SEP-1999; 99US-0155493P.
 XX PR 23-SEP-1999; 99WO-US0200881.
 XX PR 13-OCT-1999; 99US-00416901.
 XX PR 06-DEC-1999; 99US-0169232P.
 XX PR 22-SEP-2000; 2000GB-00023315.
 XX PA (PHAA) PHARMACIA & UPJOHN CO.
 XX PI Bienkowiecki MJ, Gurney M;
 XX DR WPI; 2002-397167/43.
 XX DR N-PSDB; ABL52458.
 XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl

PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
 XX Example 2; Fig 3; 182pp; English.
 XX
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (II) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC -coding strand complementary to a defined 1804 nucleotide sequence (see
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 CC comprising (III) or (III'); and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (II) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence represents hu-Asp2(b) from the present invention
 CC
 XX Sequence 476 AA;
 SQ
 Query Match 100.0%; Score 104; DB 1; Length 476;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLSGGCGAPLGL 41
 Db 22 TQHGIRLPRLSGGCGAPLGL 41
 RESULT 98
 ADJ94318 standard; protein; 476 AA.
 XX ID ADJ94318
 XX AC ADJ94318;
 XX DT 03-JUN-2004 (first entry)
 XX DE Human aspartyl protease 2b, Asp-2b.
 XX KW Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 KM neurotropic; neuroprotective; amyloid beta.
 XX OS Homo sapiens.
 XX GN US6706485-B1.
 XX PN 16-MAR-2004.
 XX PD 12-APR-2000; 2000US-00548376.
 XX PF 24-SEP-1998; 98US-0101594P.
 XX PR 23-SEP-1999; 99US-00404133.
 XX PR 23-SEP-1999; 99US-0155493P.
 XX PR 23-SEP-1999; 99WO-US0200881.
 XX PR 13-OCT-1999; 99US-00416901.
 XX PA (PHAA) PHARMACIA & UPJOHN CO.
 XX PI Gurney ME, Bienkowski MJ, Heintzkeon RL, Parodi LA, Yan R;
 XX DR WPI; 2004-236722/22.
 XX DR N-PSDB; ADJ94317.

```

XX  Identifying agents that modulate activity of Asp2 aspartyl protease
PT  useful for treating or preventing Alzheimer's disease involves comparing
PT  APP processing activity of protease in presence and absence of test
PT  agent.
XX
XX  Claim 7; SEQ ID NO 6; 109pp; English.
XX
CC  The invention relates to identifying agents that modulate activity of
CC  Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC  encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
CC  precursor protein (APP) in the presence and absence of a test agent,
CC  where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC  beta, determining APP processing activity of Asp2 in presence and absence
CC  of the test agent, and comparing the activities to identify agents that
CC  modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC  for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
CC  nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
CC  the vector and the method of producing Hu-Asp polypeptide, an isolated
CC  antibody that specifically binds to Hu-Asp polypeptides, identifying a
CC  cell that can be used to screen for inhibitors of beta secretase
CC  activity, novel isoforms of amyloid protein precursor (APP), where the
CC  last 2 carboxy terminus amino acids of that isoform are both lysine
CC  residues (e.g. those designated APP695-KX or carrying the Swedish
CC  mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW
CC  or APP695-SW-KX, or a V to F mutation at 642, e.g. APP695-VF, all useful
CC  for assaying for beta secretase activity and screening for inhibitors of
CC  beta-secretase) and polynucleotides that encode the APP proteins. The
CC  method is useful for identifying agents that modulate the activity
CC  (amyloid precursor protein processing activity) of Asp2 aspartyl
CC  protease. Preferably, the method is useful for identifying agents that
CC  inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC  precursor protein processing, are useful for treating or preventing
CC  Alzheimer's disease. The present sequence represents an aspartyl protease
CC  of the invention.
XX
SQ  Sequence 476 AA;
XX
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY  22 TQHGIRLPRLRSGLGAPLGL 41
    ||||||||||||||||
DB  22 TQHGIRLPRLRSGLGAPLGL 41
XX
RESULT 99
AD050414 AD050414 standard; protein; 476 AA.
XX
AC  AD050414;
XX
DT  29-JUL-2004 (first entry)
XX
DE  Human aspartyl protease (Asp)-2(b).
XX
KW  Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW  Alzheimer's disease; gene therapy; human; enzyme.
XX
OS  Homo sapiens.
XX
FH  Key Location/Qualifiers
FH  Peptide 1..21
FT  /label=Signal_peptide
FT  Protein 22..476
FT  /note="Human mature aspartyl protease (Asp)-2"
FT  Domain 430..452
FT  /note = Transmembrane domain
FT  Domain 453..476
FT  /note = Cytoplasmic domain
XX
PN  US6737510-B1.

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XX  18-MAY-2004.
XX
XX  12-APR-2000; 2000US-00548373.
XX
PR  24-SEP-1998; 98US-0101594P.
PR  23-SEP-1999; 99US-00404133.
PR  23-SEP-1999; 99US-0155493P.
PR  23-SEP-1999; 99MO-US020881.
PR  13-OCT-1999; 99US-00416901.
XX
PA  (PMAA ) PHARMACIA & UPJOHN CO.
XX
PI  Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX  WPI; 2004-387112/36.
DR  N-PSDB; AD050413.
XX
PT  New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT  involved in processing amyloid precursor protein into amyloid beta,
PT  useful in preparing a composition for treating or preventing Alzheimer's
PT  disease.
XX
PS  Claim 1; SEQ ID NO 6; 108pp; English.
XX
CC  The invention relates to a method for identifying an agent that decreases
CC  the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC  provides enzyme and enzymatic procedures for cleaving the beta secretase
CC  cleavage site of the amyloid precursor protein (APP). The invention is
CC  useful in preparing a composition for treating or preventing Alzheimer's
CC  disease. It is also useful in gene therapy. The present sequence is human
CC  Asp-1 protein. This sequence is used to illustrate the method of the
CC  invention.
XX
SQ  Sequence 476 AA;
XX
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY  22 TQHGIRLPRLRSGLGAPLGL 41
    ||||||||||||||||
DB  22 TQHGIRLPRLRSGLGAPLGL 41
XX
RESULT 100
ADR75327 ADR75327 standard; protein; 476 AA.
XX
AC  ADR75327;
XX
DT  18-NOV-2004 (first entry)
XX
DE  Human aspartyl protease (Asp)-2(b) enzyme.
XX
KW  Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KW  chromosome identification; Alzheimer's disease; human; enzyme.
XX
OS  Homo sapiens.
XX
FH  Key Location/Qualifiers
FH  Peptide 1..21
FT  /label=Signal_peptide
FT  Protein 22..476
FT  /note="Human mature aspartyl protease (Asp)-2"
FT  Domain 430..452
FT  /note = Transmembrane domain
FT  Domain 453..476
FT  /note = Cytoplasmic domain
XX
PN  US2004166507-A1.
XX
PD  26-AUG-2004.

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XX 29-AUG-2003; 2003US-00652045.
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 13-OCT-1999; 99US-00416901.
XX
PA (GURNEY) GURNEY M E.
PA (BIEN/) BIENKOWAKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;
DR WPI; 2004-624916/60.
DR N-PSDB; ADR75326.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.
XX
PS Claim 1; SEQ ID NO 6; 107pp; English.
XX
CC The invention relates to nucleic acid sequences encoding aspartyl
CC protease (Asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridise with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the human Asp-2(b) enzyme. This sequence is used to
CC illustrate the method of the invention.
XX
SQ Sequence 476 AA;

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```

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLSGGAPLGL 41
Db 22 TQHGIRLPRLSGGAPLGL 41

```

```

RESULT 101
AAB61334
ID AAB61334 standard; protein; 488 AA.
XX
AC AAB61334;
XX
DT 02-APR-2001 (first entry)
XX
DE Memapsin 2 protein.
XX
KW Memapsin 2; catalyst; Alzheimer's.
XX
OS Homo sapiens.
XX
PN WO200100663-A2.
XX
PD 04-JAN-2001.
XX
PF 27-JUN-2000; 2000WO-US017661.
XX
PR 28-JUN-1999; 99US-0141363P.
PR 30-NOV-1999; 99US-0168060P.

```

```

PR 25-JAN-2000; 2000US-0177836P.
PR 27-JAN-2000; 2000US-0178368P.
PR 08-JUN-2000; 2000US-0210292P.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
PI Tang JUN, Lin X, Koelech G;
XX
DR WPI; 2001-102885/11.
XX
PT Purified recombinant catalytically active memapsin 2, used to screen
PT inhibitors of it, which are used to treat and prevent Alzheimer's
PT disease.
XX
PS Claim 2; Page 73-75; 86pp; English.
XX
XX The present invention relates to a purified recombinant catalytically
CC active memapsin 2. The invention may be used for isolating inhibitors
CC which are used to treat or prevent Alzheimer's disease. The invention may
CC also be used to screen for individuals more genetically prone to develop
CC Alzheimer's disease
XX
SQ Sequence 488 AA;

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Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLSGGAPLGL 41
Db 9 TQHGIRLPRLSGGAPLGL 28

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RESULT 102
AAB6572
ID AAB6572 standard; protein; 488 AA.
XX
AC AAB6572;
XX
DT 12-APR-2001 (first entry)
XX
DE Human memapsin 2.
XX
KW Human; memapsin 2; neurotrophic; neuroprotective; amyloid precursor protein;
KW APP; memapsin 2 inhibitor; Alzheimer's disease.
XX
OS Homo sapiens.
XX
PN WO200100665-A2.
XX
PD 04-JAN-2001.
XX
PF 27-JUN-2000; 2000WO-US017742.
XX
PR 28-JUN-1999; 99US-0141363P.
PR 30-NOV-1999; 99US-0168060P.
PR 25-JAN-2000; 2000US-0177836P.
PR 27-JUN-2000; 2000US-0178368P.
PR 08-JUN-2000; 2000US-0210292P.
XX
PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.
PA (UNIT ) UNIV ILLINOIS FOUND.
XX
PI Tang JUN, Hong L, Ghosh AK;
XX
DR WPI; 2001-137933/14.
DR N-PSDB; AAF31848.
XX
PT Novel memapsin 2 inhibitors which bind to active site of memapsin 2
PT having 2 catalytic aspartic residues and substrate binding cleft, used to
PT treat Alzheimer's disease by blocking amyloid precursor protein cleavage.
XX
PS Example 1; Page 72-74; 86pp; English.

```

XX The present sequence is given in a specification relating to an inhibitor
CC of catalytically active memapsin 2. The inhibitor binds to the memapsin 2
CC active site, which is defined by the presence of two catalytic aspartic
CC residues and a substrate binding cleft. The inhibitor is useful for the
CC treatment and diagnosis of Alzheimer's disease. It is useful in screens
CC for individuals with a genetic predisposition to Alzheimer's disease. The
CC inhibitor is useful as a reagent for specifically binding to memapsin 2
CC or memapsin 2 analogues and for aiding in memapsin 2 isolation,
CC purification and characterization
XX
SQ Sequence 488 AA;
Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPURSGUGAPLGL 41
DB 9 TQHGIRLPURSGUGAPLGL 28
RESULT 103
ABG78372
ID ABG78372 standard; protein; 488 AA.
AC ABG78372;
DT 15-NOV-2002 (first entry)
DE Human promemapsin 2.
XX
XX Human; enzyme; memapsin 2; aspartic protease; beta secretase;
KM degenerative disease; Alzheimer's disease; amyloid precursor protein;
KW APP; neuroprotective; nootropic; inhibitor;
XX substrate side-chain preference.
XX
XX Homo sapiens.
OS
XX
XX WO200253594-A2.
PN 11-JUL-2002.
XX
XX 28-DEC-2001; 2001WO-US050826.
PF 28-DEC-2000; 2000US-0258705P.
XX 14-MAR-2001; 2001US-0275756P.
PR
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
PA (UNII) UNIV ILLINOIS FOUND.
PI
XX Tang JUN, Koelsch G, Ghosh AK;
XX WPI; 2002-619088/66.
DR
XX New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's
PT disease.
PT
XX Claim 7; Fig 7; 74pp; English.
PS
XX The invention relates to an inhibitor of catalytically active memapsin 2
CC (an aspartic protease which can cleave at beta secretase sites), which
CC binds to the active site of memapsin 2 defined by the presence of two
CC catalytic aspartic residues and substrate binding cleft. Also included is
CC a method of determination of the substrate side-chain preference in
CC memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2
CC substrates with memapsin 2, and determining the sub-site preference of
CC memapsin 2 by determining relative initial hydrolysis rates of the
CC mixture of memapsin 2 substrates; or (b) preparing a combinatorial
CC library of memapsin 2 inhibitors containing a base sequence taken from
CC OM99-2 (Glu-Val-An-Leu-Ala-Ala-Glu-phe), probing the library of
CC inhibitors with memapsin 2 which binds to several inhibitors to generate
CC several bound memapsin 2, and detecting the bound memapsin 2 with an

CC antibody raised to memapsin 2 and an alkaline phosphatase conjugated
CC secondary antibody. The inhibitors may be used in the manufacture of a
CC medicament for the treatment of Alzheimer's disease since memapsin 2 may
CC be involved in the cleavage of amyloid precursor protein (APP), and for
CC determining the substrate side-chain preference in memapsin 2 sub-sites.
CC The present sequence represents human memapsin 2 (either prepromemapsin 2
CC or mature memapsin)
XX
SQ Sequence 488 AA;
Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPURSGUGAPLGL 41
DB 9 TQHGIRLPURSGUGAPLGL 28
RESULT 104
AAU99488
ID AAU99488 standard; protein; 488 AA.
AC AAU99488;
DT 07-OCT-2002 (first entry)
DE Human memapsin 2.
XX
XX Human; memapsin 2; beta secretase; aspartic protease; APP;
KM beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;
KW neuroprotective; nootropic; enzyme.
XX
XX Homo sapiens.
OS
XX US2002049303-A1.
PN 25-APR-2002.
XX
XX 28-FEB-2001; 2001US-00796264.
PF 28-JUN-1999; 99US-0141363P.
XX 30-NOV-1999; 99US-0168060P.
PR 25-JAN-2000; 2000US-0177836P.
XX 27-JAN-2000; 2000US-0178368P.
PR 27-JUN-2000; 2000US-00604608.
XX
XX (TANG/) TANG J J N.
PA (LINK/) LIN X.
XX (KOEI/) KOELSCH G.
PA (HONG/) HONG L.
XX
XX Tang JUN, Lin X, Koelsch G, Hong L;
XX WPI; 2002-507280/54.
DR N-PSDB; ABR88641.
DR
XX New recombinant catalytically active memapsin 2, useful to screen for
PT inhibitors of memapsin 2 which can be used to prevent and treat
PT Alzheimer's disease.
PT
XX Claim 2; Page 22-23; 44pp; English.
PS
XX The present invention relates to methods for the production of purified,
CC recombinant catalytically active, memapsin 2 (beta secretase). Memapsin
CC 2, a member of the aspartic protease family, cleaves beta-amyloid
CC precursor protein (APP) found in amyloid plaques. The recombinant
CC memapsin 2 is useful for identifying inhibitors of memapsin 2 in the
CC design of drugs for the treatment and/or prevention of Alzheimer's
CC disease. The recombinant memapsin 2 can be used to immunise against
CC Alzheimer's disease. The present sequence represents human memapsin 2
XX
SQ Sequence 488 AA;

CC screening of specific inhibitors which are useful in treating and
 CC preventing Alzheimer's disease. The current sequence is that of the human
 CC memapsin 2 protein of the invention.

XX Sequence 488 AA;

Query Match 100.0%; Score 104; DB 1; Length 488;

Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGLGAPLGL 41
 |||||
 DB 9 TOHGIRLPRLSGLGAPLGL 28

RESULT 107

AAW59807
 ID AAW59807 standard; protein; 501 AA.

XX AAW59807;

XX 26-OCT-1998 (first entry)

XX Amino acid sequence of human ASP2 (aspartic protease 2).

XX Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;
 KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;
 KW prohormone processing.

XX Homo sapiens.

XX EP85444-A2.

XX 29-JUL-1998.

XX 27-JAN-1998; 98EP-00300573.

XX 28-JAN-1997; 97GB-00001684.

XX (SMIK) SMITHKLINE BEECHAM PLC.

XX (SMIK) SMITHKLINE BEECHAM CORP.

XX Powell DJ, Smith TS, Chapman CG, Murphy K;

XX WPI; 1998-389809/34.

XX N-PSDB; AAV41696.

XX New nucleic acid encoding human aspartic protease 2 - used to treat,
 PT prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone
 PT processing.

XX Claim 1; Page 7; 26pp; English.

XX This is the amino acid sequence of the human ASP2 (aspartic protease
 CC family), used in the method of the invention. Agonists and antagonists
 CC for ASP2 immunospecific antibodies are used to treat conditions requiring
 CC increased or decreased activity or expression of ASP2 respectively. ASP2
 CC is used to treat and diagnose e.g. Alzheimer's disease, cancer and
 CC prohormone processing and ASP2 or a fragment can be used to induce an
 CC immune response against the above conditions

XX Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;

Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGLGAPLGL 41
 |||||
 DB 22 TOHGIRLPRLSGLGAPLGL 41

RESULT 108

AAV88425
 ID AAV88425 standard; protein; 501 AA.

XX AAV88425;

XX 03-AUG-2000 (first entry)

XX Human aspartyl protease 2 (a) (Asp2) amino acid sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

XX Alzheimer's disease; beta secretase site.

XX Homo sapiens.

XX W0200017369-A2.

XX 30-MAR-2000.

XX 23-SEP-1999; 99MO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinkinson RL, Parodi LA, Van R;

XX WPI; 2000-303209/26.

XX N-PSDB; AAV15662.

XX New enzyme designated human aspartase useful in research into Alzheimer's
 PT Disease is capable of cleaving amyloid protein precursor at the beta
 PT secretase site to produce amyloid beta peptide.

XX Claim 48; Fig 2; 183pp; English.

XX This sequence represents the human aspartyl protease 2 (Asp2) amino acid
 CC sequence. The invention relates to a protease (e.g. Asp2) capable of
 CC cleaving the beta secretase site of amyloid precursor protein (APP). The
 CC protease contains a sequence encoding the amino acid sequence DTS and a
 CC sequence encoding DSG or DTS separated by 100-300 amino acids. When
 CC mutated the APP gene causes an autosomal dominant form of Alzheimer's
 CC disease. APP localises to the cell surface membrane and have a single C-
 CC terminal transmembrane domain. Proteolytic processing of APP produces the
 CC amyloid beta protein, which is possibly very important in Alzheimer's
 CC disease. The invention includes a nucleotide sequence encoding the
 CC protease, a vector containing the nucleotide sequence, and a cell line
 CC comprising the vector. Methods for screening for inhibitors of beta
 CC secretase activity are also given in the invention. The human aspartase
 CC protein and nucleotide sequences and the methods for identifying
 CC inhibitors of the protease, are useful in the treatment of and research
 CC in to Alzheimer's disease

XX Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;

Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGLGAPLGL 41
 |||||
 DB 22 TOHGIRLPRLSGLGAPLGL 41

RESULT 109

AAV94767
 ID AAV94767 standard; protein; 501 AA.

XX AAV94767;

XX 12-FEB-2001 (first entry)

XX Human beta-secretase amino acid sequence.

FT /note= "Signal peptide"
FT Misc-difference 22..45
FT /note= "Pre-propeptide"
FT Misc-difference 46..57
FT /note= "Propeptide"
FT Protein 58..501
FT /note= "Mature Aspartyl protease-2a"
FT Region 420..454
FT /note= "Alpha helical spacer region"
FT Domain 455..477
FT /note= "Transmembrane domain"
FT Domain 478..501
FT /note= "Cytoplasmic domain"
PD WO200149097-A2.
PD 12-JUL-2001.
PP 09-MAY-2001; 2001WO-IB000797.
PR 09-MAY-2001; 2001WO-IB000797.
PA (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX N-PSDB; AAS11702.
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Claim 49; Fig 2; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (APP)
XX comprising the amino acid sequence of a APP or its fragment containing an
XX APP cleavage site recognizable by a mammalian beta-secretase, and further
XX comprising two lysine residues at the carboxyl terminus of the amino acid
XX sequence of the mammalian APP or APP fragment. The polypeptides are used
XX for assaying for modulators of beta-secretase activity; identifying
XX agents that inhibit the APP processing activity of human Asp2 aspartyl
XX protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
XX; and for reducing cellular production of amyloid beta (Abeta) from APP.
XX Agents identified by the above methods are useful for treating
XX Alzheimer's disease; and for identifying modulators of amyloid-beta
XX (Abeta) peptide production, for use in designing therapeutics for the
XX treatment or prevention of Alzheimer's disease. Probes and primers
XX derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
XX nucleic acids in in vitro assays and in Northern and Southern blots. The
XX present sequence represents the amino acid sequence of human Asp-2a used
XX in the methods of the invention
XX
XX Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
XX
SQ Sequence 501 AA;
Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No.33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPURSGUGAPLGL 41
DB 22 TQHGIRLPURSGUGAPLGL 41

RESULT 112
AAE10629
ID AAE10629 standard; protein; 501 AA.
XX
XX AAE10629;
XX
XX 10-DEC-2001 (first entry)
XX
XX Human aspartyl protease 2(a) [hu-Asp2(a)] protein.
XX
XX Human aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective;
XX chromosome 11q23.3-24.1.
XX
XX Homo sapiens.
XX
XX
XX Key Location/Qualifiers
XX Peptide 1..21
XX /label= Signal_peptide
XX Peptide 22..45
XX /label= Asp_2a_prepropeptide
XX Peptide 46..57
XX /label= Asp_2a_propeptide
XX Protein 58..501
XX /label= Mature_human_Asp_2a_protein
XX Region 420..454
XX /label= Alpha-helical_spacer_region
XX Domain 455..477
XX /label= Transmembrane_domain
XX Domain 478..501
XX /label= Cyttoplasmic_domain
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Bienkowski MJ, Gurney M;
XX
XX WPI; 2001-444208/48.
XX N-PSDB; AAP17865.
XX
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 2; Fig 2; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence is long form of human

CC Asp2 protein, designated as Asp2(a). Asp2 gene is localised on chromosome
CC 11q23.3-24.1
XX
SQ Sequence 501 AA;
Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLSGLGAPLGL 41
DB 22 TQHGIRLPRLSGLGAPLGL 41
RESULT 113
AAE06859
ID AAE06859 standard; protein; 501 AA.
XX
AC AAE06859;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human aspartyl protease 2a (Hu-Asp2a) protein.
XX
KW Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
KW neuroprotective; antisense therapy; gene therapy;
KW chromosome 11q23.3-24.1.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1..21
FT /label= Signal_peptide
FT Protein 22..501
FT /note= "Mature human aspartyl protease 2a (Hu-Asp2a)"
FT Region 420..454
FT /note= "Alpha helical spacer region"
FT Domain 455..477
FT /label= Transmembrane_domain
FT Domain 478..501
FT /label= Cytoplasmic_domain
XX
XX W0200150829-A2.
XX
XX 19-JUL-2001.
XX
PD 09-MAY-2001; 2001WO-IB000799.
XX
PF 09-MAY-2001; 2001WO-IB000799.
XX
PR 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2001-483072/52.
XX N-PSDB; AAD13021.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 49; Fig 2; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for

CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta and
CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present sequence is human aspartyl protease 2 (Hu-Asp2), a 'long'
CC form designated as (Hu-Asp2a). Hu-Asp 2 gene is localised on chromosome
CC 11q23.3-24.1
XX
XX SQ Sequence 501 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLSGLGAPLGL 41
DB 22 TQHGIRLPRLSGLGAPLGL 41
RESULT 114
AAE02581
ID AAE02581 standard; protein; 501 AA.
XX
AC AAE02581;
XX
DT 10-AUG-2001 (first entry)
XX
DE Human aspartyl protease 2a (Asp 2a).
XX
KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; Alzheimer's; aspartyl protease 2a; Asp 2a;
KW beta-secretase; chromosome 11q23.3-24.1.
XX
XX Homo sapiens.
XX
XX FH Key Location/Qualifiers
FT Peptide 1..21
FT /label= Signal_peptide
FT Peptide 22..45
FT /label= Asp_2a_prepropeptide
FT Peptide 46..57
FT /label= Asp_2a_propeptide
FT Protein 58..501
FT /label= Mature_human_Asp_2a_protein
FT Active-site 93..95
FT /label= Active_site_1
FT Active-site 289..291
FT /label= Active_site_2
FT Region 420..454
FT /label= Alpha_helical_spacer
FT Domain 455..477
FT /label= Transmembrane_domain
FT Domain 478..501
FT /label= Cytoplasmic_domain
FT Region 486..501
FT /note= "Peptide #2"
XX
XX W0200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX
XX 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney M, Bienkowski MJ;
 XX
 DR WPI; 2001-290516/30.
 DR N-PSDB; AAD06739.
 XX
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
 PT protein, useful for the treatment of Alzheimer's disease.
 XX
 PS Example 2; Fig 2; 189pp; English.
 XX
 CC The present invention relates to enzymes for cleaving the alpha-
 CC secretase site of the amyloid precursor protein (APP) and methods of
 CC identifying those enzymes. The methods may be used to identify enzymes
 CC that may be used to cleave the alpha-secretase cleavage site of the APP
 CC protein. The enzymes may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is human aspartyl protease 2a
 CC (Asp 2a). Asp 2a has beta-secretase protease activity. Asp2 gene is
 CC located on chromosome 11q23.3-24.1
 XX
 SQ Sequence 501 AA;
 XX
 Query Match 100.0%; Score 104; DB 1; Length 501;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLSGLGAPLGL 41
 DB 22 TQHGIRLPRLSGLGAPLGL 41
 XX
 RESULT 115
 AAU06603
 ID AAU06603 standard; protein; 501 AA.
 AC AAU06603;
 XX
 DT 09-SEP-2004 (revised)
 DT 24-OCT-2001 (first entry)
 XX
 DE Human Aspartyl protease 2(a), Asp2(a).
 XX
 KW Human; Aspartyl protease; Asp2(a); beta-secretase; neurotropic;
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KW amyloid-beta; Abeta.
 XX
 OS Homo sapiens.
 OS unidentified.
 XX
 FT Key Location/Qualifiers
 FT Peptide 1..21
 FT Peptide /label= Signal peptide
 FT Peptide 22..45
 FT Peptide /label= Pre_pro_peptide
 FT Peptide 46..57
 FT Protein /label= Pro_peptide
 FT Protein 57..501
 FT Region /label= Mature_Asp2(a)
 FT Region 420..454
 FT Domain /label= Alpha_helical_spacer_region
 FT Domain 455..477
 FT Domain /note = Transmembrane domain
 FT Domain 478..501
 FT /note = Cytoplasmic domain
 XX
 PN MO200149098-A2.
 PD 12-JUL-2001.
 XX

PF 09-MAY-2001; 2001WO-1B000798.
 XX
 PR 09-MAY-2001; 2001WO-1B000798.
 XX
 PA (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX
 DR WPI; 2001-502549/55.
 DR N-PSDB; AAS11517.
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Claim 49; Fig 2; 185pp; English.
 XX
 CC The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridise to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence is human Asp2(a)
 CC
 CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
 CC
 SQ Sequence 501 AA;
 XX
 Query Match 100.0%; Score 104; DB 1; Length 501;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLSGLGAPLGL 41
 DB 22 TQHGIRLPRLSGLGAPLGL 41
 XX
 RESULT 116
 ABB06409
 ID ABB06409 standard; protein; 501 AA.
 AC ABB06409;
 XX
 DT 31-MAY-2002 (first entry)
 DT
 XX
 DE Human aspartyl protease protein sequence SEQ ID NO:2.
 XX
 KW Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;
 KW aspartyl protease; neuroprotective; neurotropic; beta-secretase inhibitor;
 KW Alzheimer's disease.
 XX

OS Homo sapiens.
XX
XX W0200206306-A2.
XX
XX 24-JAN-2002.
XX
XX 19-JUL-2001; 2001WO-US023035.
PF
XX 19-JUL-2000; 2000US-0219795P.
PR 12-MAR-2001; 2001US-0275251P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
PA
XX
PI Yan R, Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ,
PI Heinrichson RL;
XX
XX WPI; 2002-216995/27.
DR N-PSDB; ABL49914.
XX
XX Novel substrates for human aspartyl protease useful for identifying
PT modulators of beta secretase activity of aspartyl protease for treating
PT Alzheimer's disease.
XX
XX
PS Claim 63; Page 118-119; 188pp; English.
XX
CC The present invention describes an isolated peptide (I) comprising a
CC sequence of at least four amino acids, where the peptide is a substrate
CC for conducting aspartyl protease assays. (I) has neuroprotective and
CC neurotropic activities, and can be used as an inhibitor of beta-secretase
CC activity. A beta-secretase modulator from the present invention can be
CC used for inhibiting beta-secretase activity in vivo, and in the
CC manufacture of a medicament for the treatment of Alzheimer's disease.
CC Pharmaceutical compositions from the present invention can be used for
CC treating a disease or condition characterized by an abnormal beta-
CC secretase activity. (II) is useful for identifying agents that modulate
CC the activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as
CC a core structure to construct derivatives. ABL49914 to ABL49925 and
CC ABB06409 to ABB06593 represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 501 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLNSGLGAPLGL 41
Db 22 TQHGIRLPRLNSGLGAPLGL 41
XX
RESULT 117
ABG78374
ID ABG78374 standard; protein; 501 AA.
XX
XX ABG78374;
XX
XX 15-NOV-2002 (first entry)
DT
XX
XX Human prepromemapsin 2.
DE
XX
XX Human; enzyme; memapsin 2; aspartic protease; beta secretase;
KW degenerative disease; Alzheimer's disease; amyloid precursor protein;
KW APP; neuroprotective; neurotropic; inhibitor;
KW substrate side-chain preference.
XX
XX Homo sapiens.
OS
XX W0200253594-A2.
XX
XX 11-JUL-2002.
PD
XX 28-DEC-2001; 2001WO-US050826.
PF

XX
XX 28-DEC-2000; 2000US-0258705P.
PR 14-MAR-2001; 2001US-0275756P.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
PA (UNII) UNIV ILLINOIS FOUND.
XX
XX Tang JUN, Koelach G, Ghosh AK;
PI
XX WPI; 2002-619088/66.
DR
XX
XX New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's
PT disease.
PT
XX
XX Disclosure; Fig 9; 74pp; English.
XX
XX
PS The invention relates to an inhibitor of catalytically active memapsin 2
CC (an aspartic protease which can cleave at beta secretase sites), which
CC binds to the active site of memapsin 2 defined by the presence of two
CC catalytic aspartic residues and substrate binding cleft. Also included is
CC a method of determination of the substrate side-chain preference in
CC memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2
CC substrates with memapsin 2, and determining the sub-site preference of
CC memapsin 2 by determining relative initial hydrolysis rates of the
CC mixture of memapsin 2 substrates; or (b) preparing a combinatorial
CC library of memapsin 2 inhibitors containing a base sequence taken from
CC OM99-2 (Glu-Val-Asn-Leu-Ala-Ala-Glu-Phe), probing the library of
CC inhibitors with memapsin 2, which binds to several inhibitors to generate
CC several bound memapsin 2, and detecting the bound memapsin 2 with an
CC antibody raised to memapsin 2 and an alkaline phosphatase conjugated
CC secondary antibody. The inhibitors may be used in the manufacture of a
CC medicament for the treatment of Alzheimer's disease since memapsin 2 may
CC be involved in the cleavage of amyloid precursor protein (APP), and for
CC determining the substrate side-chain preference in memapsin 2 sub-sites.
CC The present sequence represents human memapsin 2 (either prepromemapsin 2
CC or mature memapsin)
XX
SQ Sequence 501 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLNSGLGAPLGL 41
Db 22 TQHGIRLPRLNSGLGAPLGL 41
XX
RESULT 118
ABB78590
ID ABB78590 standard; protein; 501 AA.
XX
XX ABB78590;
XX
XX 16-JUL-2002 (first entry)
DT
XX
XX Human Asp-2(a) protein sequence SEQ ID NO:4.
DE
XX
XX Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;
KW proteolytic; chromosome 11q23.3-24.1.
KW
XX
XX Homo sapiens.
OS
XX GB2367060-A.
XX
XX 27-MAR-2002.
PD
XX
XX 29-OCT-2001; 2001GB-00025934.
PF
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR

PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX
PA (PHAA) PHARMACIA & UPJOHN CO.
XX
PI Bienkowskaki MJ, Gurney M;
XX
DR WPI; 2002-397167/43.
XX
DR N-PSDB; ABL52457.
XX
PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
PS Example 2; Fig 2; 182pp; English.
XX
CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non
CC -coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III') comprising a sequence that
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589); (4) a vector (IV)
CC comprising (III) or (III') and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence represents hu-Asp2(a) from the present invention
XX
SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPKRSGLGAPLGL 41
Db 22 TOHGIRLPKRSGLGAPLGL 41

RESULT 119
ABP59564
ID ABP59564 standard; protein; 501 AA.
XX
AC ABP59564;
XX
DT 11-AUG-2003 (first entry)
XX
DE Human ASP2 protein.
XX
KW Human; ASP2; Alzheimer's disease; transgenic; animal model.
XX
OS Homo sapiens.
XX
PN EP1285578-A2.
XX
PD 26-FEB-2003.
XX
PF 20-AUG-2002; 2002EP-00078428.
XX
PR 21-AUG-2001; 2001GB-00020342.
XX
PR 07-NOV-2001; 2001GB-00026723.
XX

PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
XX Geppert M, Harper AJ, Harrison SM, Prosser H;
XX
PI WPI; 2003-344707/33.
XX
DR WPI; 2003-344707/33.
XX
PT New recombinant DNA construct comprising a brain-specific calcium
PT calmodulin kinase promoter sequence operably linked to a sequence
PT encoding a human ASP2, for making animal models for screening agents to
PT treat Alzheimer's disease.
XX
XX
PS Claim 1; Page 12; 15pp; English.
XX
CC The present invention relates to the human ASP2 protein and coding
CC sequences. It also describes a fusion coding sequence where the Asp2
CC coding sequence is linked to a brain-specific calcium calmodulin kinase
CC promoter, and an animal model containing this sequence. The recombinant
CC agents which can be used in the treatment of neurological disorders,
CC particularly Alzheimer's disease. The transgenic animal or cells may be
CC used to screen for therapeutic agents, which inhibit the activity of
CC ASP2, and consequently the processing of APP and amyloid deposits. The
CC present sequence is the human ASP2 protein
XX
SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPKRSGLGAPLGL 41
Db 22 TOHGIRLPKRSGLGAPLGL 41

RESULT 120
ABR61928
ID ABR61928 standard; protein; 501 AA.
XX
AC ABR61928;
XX
DT 12-SEP-2003 (first entry)
XX
DE Human memapsin 2 protein.
XX
XX
KW Memapsin 1; nootropic; neuroprotective; memapsin 2; beta secretase;
KW beta-amyloid protein; Alzheimer's disease; human; enzyme.
XX
OS Homo sapiens.
XX
XX
FH Key location/Qualifiers
FH Peptide 1..21
FT /note= "signal peptide"
FT 22..501
FT /note= "mature protein"
FT Peptide 22..45
FT /note= "propeptide"
FT 455..480
FT Domain /note= "transmembrane domain"
XX
XX
PN WO2003039454-A2.
XX
PD 15-MAY-2003.
XX
PF 23-OCT-2002; 2002WO-US034324.
XX
PR 23-OCT-2001; 2001US-0335952P.
PR 27-NOV-2001; 2001US-033545P.
PR 14-JAN-2002; 2002US-0348464P.
PR 14-JAN-2002; 2002US-0348615P.
PR 20-JUN-2002; 2002US-0390804P.
PR 19-JUL-2002; 2002US-0397557P.
PR 19-JUL-2002; 2002US-0397619P.
PR

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
PA (UNIT) UNIV ILLINOIS FOUND.
XX Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J,
PI Turner RT;
XX WPI; 2003-541410/51.
DR N-PSDB; ACC84849.
XX
XX New peptide compounds are memapsin beta secretase inhibitors used for
PT treating Alzheimer's disease.
XX
XX Claim 98; Fig 9; 407pp; English.
XX
XX The invention relates to peptide compounds of specified formula. The
CC compounds exhibit memapsin 2-beta secretase inhibitory activity relative
CC to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid
CC protein. The compounds can be used for treating Alzheimer's disease. The
CC present sequence represents a human memapsin 2 protein (Genbank Index
CC (GI):6912266)
XX
SQ Sequence 501 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. NO. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41
XX
RESULT 121
ADC81560
XX ADC81560 standard; protein; 501 AA.
XX
XX ADC81560;
XX 01-JAN-2004 (first entry)
XX
XX Human BACE amino acid sequence SEQ ID NO:1.
XX
XX human; BACE; modification; Pro33lys; pro-enzyme.
XX
XX Homo sapiens.
XX
XX MO2003072733-A2.
XX
XX 04-SEP-2003.
XX
XX 21-FEB-2003; 2003WO-US005508.
XX
XX 21-FEB-2002; 2002US-0358651P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Chou K, Howe JW;
XX
XX WPI; 2003-712719/67.
XX
XX BACE polypeptides having Pro33lys modification, useful in determining
PT possible mutations, which will inhibit enzyme activity, and in
PT determining potential active site for target molecules.
XX
XX Example 1; SEQ ID NO 1; 38pp; English.
XX
XX The present invention describes an isolated polypeptide (1) comprising or
CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),
CC and comprising human BACE having the modification Pro33lys. Also
CC described: (1) a composition comprising an active human BACE enzyme
CC comprising the pro-enzyme sequence of BACE having the modification
CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding

CC (1); (3) an isolated polynucleotide consisting or comprising of
CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an
CC expression vector comprising the polynucleotide of (2), or a
CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
CC expression vector can produce the Pro33lys-BACE polypeptide when present
CC in a compatible host cell, when cultured under conditions that allow
CC production; (5) a recombinant host cell comprising the expression vector;
CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
CC polypeptide having Pro33lys modification may be used in determining
CC possible mutations, which will inhibit enzyme activity, and in
CC determining potential active site for target molecules. The vector
CC comprising the BACE polynucleotide is useful for producing recombinant
CC BACE polypeptides having Pro33lys modification. The present sequence
CC represents the human BACE amino acid sequence used in the exemplification
CC of the present invention.
XX
SQ Sequence 501 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. NO. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41
XX
RESULT 122
ADL18184
XX ADL18184 standard; protein; 501 AA.
XX
XX ADL18184;
XX 06-MAY-2004 (first entry)
XX
XX Human APP beta-secretase protein SEQ ID NO:104.
XX
XX chimeric protein; signal protein; trafficking signal targeting;
XX proteolytic cleavage site; protease; protease inhibitor; enzyme; human;
XX APP beta-secretase.
XX
XX Homo sapiens.
XX
XX MO2003014381-A1.
XX
XX 20-FEB-2003.
XX
XX 08-AUG-2002; 2002WO-KR001515.
XX
XX 10-AUG-2001; 2001KR-00048123.
XX
XX (AHRM-) AHRM BIOSYSTEMS INC.
XX
XX Hwang I, Kim DH, Lee YJ;
XX
XX WPI; 2003-256596/25.
XX
XX N-PSDB; ADL18183.
XX
XX New chimeric protein, useful for detecting protease inhibitors inside the
PT cell or tissue.
XX
XX Disclosure; SEQ ID NO 104; 214pp; English.
XX
XX The present invention describes a chimeric protein comprising at least
CC one signal protein that has a trafficking signal targeting to a
CC subcellular organelle and at least one proteolytic cleavage site for a
CC protease. The chimeric protein is constructed, so that: (a) the
CC trafficking signals of all the signal proteins are inactivated by linking
CC the proteolytic site or a signal masking protein through the proteolytic
CC site to the N- or C- terminus of the signal proteins, and so the chimeric
CC protein is present in cytosol; (b) the trafficking signal of at least one
CC signal protein is activated when the proteolytic cleavage site is cleaved
CC by the protease, and as a result at least one fragment protein that

CC includes the activated signal protein is a transported to a subcellular
CC organelle; and (c) the chimeric protein is labelled with at least one
CC fluorescent protein and the position and intensity distribution of the
CC fluorescent label signal in the cell is altered depending on the cleavage
CC by the protease. Also described: (1) a recombinant gene comprising a
CC nucleic acid sequence encoding the chimeric protein which is constructed
CC to express the chimeric protein in a cell; (2) a cell transformed with
CC the recombinant gene or vector; (3) analysing the activity of a protease
CC in vivo; (4) screening protease inhibitors in vivo; (5) a system for
CC detecting a protease inside a cell; (6) a nucleic acid comprising the
CC sequence encoding the chimeric protein for detecting protease activity in
CC a cell; (7) a vector comprising the nucleic acid; (8) a kit for detecting
CC a protease inside a cell comprising the chimeric protein or the vector;
CC (9) detecting a protease inside a cell or tissue; and (10) detecting a
CC protease inhibitor in vivo. The chimeric protein is useful for detecting
CC a protease inhibitor inside the cell or tissue. The present sequence
CC represents a human APP beta-secretase, which is used in the
CC exemplification of the present invention.

SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPURSGIGAPLGL 41
DB 22 TOHGIRLPURSGIGAPLGL 41

RESULT 123

ADG86751

ADG86751 standard; protein; 501 AA.

AC ADG86751;

DT 11-MAR-2004 (first entry)

XX Human APP-cleaving enzyme.

XX enzyme; human; beta-site amyloid precursor protein; APP-cleaving enzyme;

XX amyloid deposition; neurodegeneration; Alzheimer's disease; infection;

XX inflammation; tumour.

OS Homo sapiens.

XX US2003224512-A1.

XX 04-DEC-2003.

XX 31-MAY-2002; 2002US-00159942.

XX 31-MAY-2002; 2002US-00159942.

XX (ISIS-) ISIS PHARM INC.

XX Dobie KM;

XX WPI: 2004-051909/05.

XX N-PSDB; ADG86621.

XX New antisense compound targeted to a nucleic acid molecule encoding a

XX beta-site amyloid precursor protein (APP)-cleaving enzyme, useful for

XX treating diseases associated with beta-site APP-cleaving enzyme, e.g.

XX neurodegeneration.

XX Disclousure; SEQ ID NO 134; 58pp; English.

XX The invention relates to a compound targeted to a nucleic acid molecule

XX encoding a beta-site amyloid precursor protein (APP)-cleaving enzyme. The

XX antisense oligonucleotides and compounds are useful for inhibiting the

XX expression of beta-site amyloid precursor protein (APP)-cleaving enzyme,

XX modulating amyloid deposition in neurons, altering the expression of a

CC splice variant of beta-site APP-cleaving enzyme, and for treating
CC diseases or conditions associated with expression of beta-site APP-
CC cleaving enzyme e.g. neurodegeneration or Alzheimer's disease. The
CC antisense compounds are also useful as research reagents and kits, or in
CC diagnostic, therapeutic and prophylaxis applications, e.g. to prevent or
CC delay infection, inflammation or tumour formation. The present sequence
CC represents the amino acid sequence of the human APP-cleaving enzyme.

SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPURSGIGAPLGL 41
DB 22 TOHGIRLPURSGIGAPLGL 41

RESULT 124

ADU94316

ADU94316 standard; protein; 501 AA.

AC ADU94316;

DT 03-JUN-2004 (first entry)

XX Human aspartyl protease 2a, Asp-2a.

XX Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta.

XX Homo sapiens.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 13-OCT-1999; 99MO-US020881.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinriksen RL, Parodi LA, Yan R;

XX WPI: 2004-236722/22.

XX N-PSDB; ADU94315.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

XX useful for treating or preventing Alzheimer's disease involves comparing

XX APP processing activity of protease in presence and absence of test

XX agent.

XX Example 2; SEQ ID NO 4; 109pp; English.

XX The invention relates to identifying agents that modulate activity of

XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

XX precursor protein (APP) in the presence and absence of a test agent,

XX where Asp2 is a recombinant polypeptide and processes APP into amyloid

XX beta, determining APP processing activity of Asp2 in presence and absence

XX of the test agent, and comparing the activities to identify agents that

XX modulate the activity of Asp2. Also disclosed are the cDNA and proteins

XX for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the

XX nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising

XX the vector and the method of producing Hu-Asp polypeptide, an isolated

XX antibody that specifically binds to Hu-Asp polypeptides, identifying a

cell that can be used to screen for inhibitors of beta secretase activity, novel isoforms of amyloid protein precursor (APP), where the last 2 carboxy terminus amino acids of that isoform are both lysine residues (e.g. those designated APP695-KK or carrying the Swedish mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful for assaying for beta secretase activity and screening for inhibitors of beta-secretase) and polynucleotides that encode the APP proteins. The method is useful for identifying agents that modulate the activity (amyloid precursor protein processing activity) of Asp2 aspartyl protease. Preferably, the method is useful for identifying agents that inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid precursor protein processing, are useful for treating or preventing Alzheimer's disease. The present sequence represents an aspartyl protease of the invention.

CC
XX
SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 125
AD050412
ID AD050412 standard; protein; 501 AA.
XX
AC ADO50412;
XX
DT 29-JUN-2004 (first entry)
XX
DE Human aspartyl protease (Asp)-2(a).
XX
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; enzyme.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1..21
FT Protein /label= Signal_peptide
FT Protein 22..501
FT Protein /note= "Human mature aspartyl protease (Asp)-2"
FT Domain 455..477
FT Domain /note = Transmembrane domain
FT Domain 478..501
FT Domain /note = Cytoplasmic domain
XX
PN US6737510-B1.
XX
PD 18-MAY-2004.
XX
PF 12-APR-2000; 2000US-00548373.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-0040413P.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA) PHARMACIA & UPJOHN CO.
PI Gurney MR, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI: 2004-387112/36.
DR N-PSDB; ADO50411.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta.

useful in preparing a composition for treating or preventing Alzheimer's disease.

PT
XX
PS Example 2; SEQ ID NO 4; 108bp; English.
XX
XX The invention relates to a method for identifying an agent that decreases the protease activity of the aspartyl protease (APP) polypeptide. It also provides enzyme and enzymatic procedures for cleaving the beta secretase cleavage site of the amyloid precursor protein (APP). The invention is useful in preparing a composition for treating or preventing Alzheimer's disease. It is also useful in gene therapy. The present sequence is human Asp-1 protein. This sequence is used to illustrate the method of the invention.

CC
XX
SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 126
AD017468
ID AD017468 standard; protein; 501 AA.
XX
AC AD017468;
XX
DT 26-AUG-2004 (first entry)
XX
DE Human soft tissue sarcoma-upregulated protein - SEQ ID 285.
XX
KW soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human.
XX
OS Homo sapiens.
XX
EN WO2004048938-A2.
XX
PD 10-JUN-2004.
XX
PE 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PA (PROT-) PROTEIN DESIGN LABS INC.
XX
PI Aziz N, Ginsburg WM, Zlotnick A;
XX
XX WPI: 2004-441208/41.
XX
PT Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue sarcoma.

PT
XX
PS Example 2; SEQ ID NO 285; 210bp; English.
XX
XX The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual, and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples, where a higher level of protein expression in the first soft tissue sample indicates the presence of soft tissue sarcoma. The method of the invention has cyrostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated protein of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.

XX SQ Sequence 501 AA;
 Query Match 100.0%; Score 104; DB 1; Length 501;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLRSGLGAPLGL 41
 DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 127
 ID ADP83876
 AC ADP83876; standard; protein; 501 AA.
 DT 23-SEP-2004 (first entry)
 DE Human BACE1 amino acid sequence SEQ ID NO:1.
 KW human; beta-site amyloid precursor protein cleaving enzyme 1;
 KW beta-site App cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;
 KW prodomain; engineered cleavage site; protease domain; neuroprotective;
 KW neurotropic; gene therapy; Alzheimer's disease; Down's syndrome.
 OS Homo sapiens.
 XX Key Location/Qualifiers
 FH Region 22..446
 FT /note= "mentioned in claim 14"
 FT Region 22..45
 FT /note= "mentioned in claim 13"
 FT Region 22..41
 FT /note= "mentioned in claim 12"
 FT Region 74..446
 FT /note= "mentioned in claim 4"
 PN WO2004056962-A2.
 XX 08-JUL-2004.
 PD 02-DEC-2003; 2003WO-US038314.
 PF 04-DEC-2002; 2002US-0430984P.
 PR (SUNE-) SUNESIS PHARM INC.
 XX (SUNE-) SUNESIS PHARM INC.
 PA Ballinger M;
 PI Ballinger M;
 XX WPI; 2004-507703/48.
 DR New polypeptides for producing homogenously processed preparations of
 XX beta site amyloid precursor protein-cleaving enzyme comprises a
 FT prodomain, an engineered cleavage site and a protease domain.
 PT Claim 4; SEQ ID NO 1; 40pp; English.
 PS The present invention describes a polypeptide (1) comprising in order
 CC from the N-terminus to the C-terminus: (a) a prodomain comprising at
 CC least 6 contiguous amino acids of the 16 amino acid sequence of SEQ ID
 CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which
 CC is the longest isoform of human beta-site amyloid precursor protein (APP)
 CC cleaving enzyme 1 (BACE1, isoform A); (b) an engineered cleavage site;
 CC and (c) a protease domain. (1) is capable of being cleaved at the
 CC engineered cleavage site, and so releases a free protease domain that has
 CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (1);
 CC (2) a vector for expression of (1); and (3) a host cell expressing (1).
 CC (1) has neuroprotective and neurotropic activities, and can be used in gene
 CC therapy. (1) can be used for producing preparations of homogenously
 CC processed BACE that may be used for e.g. studying or treating diseases
 CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is

CC located on chromosome 11, more specifically to 11q23.2-23.3. The present
 CC sequence represents human BACE1 isoform A, which is used in the
 CC exemplification of the present invention.
 XX SQ Sequence 501 AA;
 Query Match 100.0%; Score 104; DB 1; Length 501;
 Best Local Similarity 100.0%; Pred. No. 33;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 22 TQHGIRLPRLRSGLGAPLGL 41
 DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 128
 ID ADR75325
 AC ADR75325; standard; protein; 501 AA.
 DT 18-NOV-2004 (first entry)
 DE Human aspartyl protease (Asp)-2(a) enzyme.
 KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
 KW chromosome identification; Alzheimer's disease; human; enzyme.
 OS Homo sapiens.
 XX Key Location/Qualifiers
 FH Peptide 1..21
 FT /label= "Signal peptide"
 FT Protein 22..501
 FT /note= "Human mature aspartyl protease (Asp)-2"
 FT Domain 455..477
 FT /note= "Transmembrane domain"
 FT Domain 478..501
 FT /note= "Cytoplasmic domain"
 PN US200416507-A1.
 XX 26-AUG-2004.
 PD 29-AUG-2003; 2003US-00652045.
 PF 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1998; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX (GURN/) GURNEY M E.
 PA (BIEN/) BIENKOWAKI M J.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;
 PI WPI; 2004-624916/60.
 DR N-PSDB; ADR75324.
 DR Novel purified/isolated polynucleotide encoding polypeptide having
 FT aspartyl protease activity involved in processing amyloid precursor
 PT protein into amyloid beta, useful in identifying agent decreasing
 XX activity of aspartyl protease.
 PS Claim 1; SEQ ID NO 4; 107pp; English.
 CC The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (Asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that

CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridise with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the human Asp-2(a) enzyme. This sequence is used to
CC illustrate the method of the invention.

XX Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
DB 22 TONGIRLPLRSGLGAPLGL 41

RESULT 129

AAB61335

ID AAB61335 standard; protein; 503 AA.

AC AAB61335;

DT 02-APR-2001 (first entry)

DE T7 promoter and vector sequence.

DE Memapsin 2; catalyst; Alzheimer's.

OS Homo sapiens.

OS Synthetic.

PN WC200100663-A2.

PD 04-JAN-2001.

PF 27-JUN-2000; 2000WO-US017661.

PR 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-0177836P.

PR 27-JAN-2000; 2000US-0178368P.

PR 08-JUN-2000; 2000US-0210292P.

PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PI Tang JUN, Lin X, Koelsch G;

DR WPI; 2001-102885/11.

PT Purified recombinant catalytically active memapsin 2, used to screen
PT inhibitors of it, which are used to treat and prevent Alzheimer's
PT disease.

PS Disclosure; Fig 1; 86pp; English.

XX The present invention relates to a purified recombinant catalytically
CC active memapsin 2. The invention may be used for isolating inhibitors
CC which are used to treat or prevent Alzheimer's disease. The invention may
CC also be used to screen for individuals more genetically prone to develop
CC Alzheimer's disease

XX Sequence 503 AA;

Query Match 100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41

DB 24 TONGIRLPLRSGLGAPLGL 43
|||||

RESULT 130

AAB65573

ID AAB65573 standard; protein; 503 AA.

AC AAB65573;

DT 12-APR-2001 (first entry)

DE Human pro-memapsin 2.

DE Human, memapsin 2; nootropic; neuroprotective; amyloid precursor protein;

KW App; memapsin 2 inhibitor; Alzheimer's disease; ss.

OS Homo sapiens.

PN WC200100665-A2.

PD 04-JAN-2001.

PF 27-JUN-2000; 2000WO-US017742.

PR 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-0177836P.

PR 27-JAN-2000; 2000US-0178368P.

PR 08-JUN-2000; 2000US-0210292P.

PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PI (UNIT) UNIT ILLINOIS FOUND.

PI Tang JUN, Hong L, Ghosh AK;

DR WPI; 2001-137933/14.

PT Novel memapsin 2 inhibitors which bind to active site of memapsin 2
PT having 2 catalytic aspartic residues and substrate binding cleft, used to
PT treat Alzheimer's disease by blocking amyloid precursor protein cleavage.

PS Example 4; Fig 1; 86pp; English.

CC The present sequence is given in a specification relating to an inhibitor
CC of catalytically active memapsin 2. The inhibitor binds to the memapsin 2
CC active site, which is defined by the presence of two catalytic aspartic
CC residues and a substrate binding cleft. The inhibitor is useful for the
CC treatment and diagnosis of Alzheimer's disease. It is useful in screens
CC for individuals with a genetic predisposition to Alzheimer's disease. The
CC inhibitor is useful as a reagent for specifically binding to memapsin 2
CC or memapsin 2 analogues and for aiding in memapsin 2 isolation,

XX purification and characterisation

XX Sequence 503 AA;

Query Match 100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
DB 24 TONGIRLPLRSGLGAPLGL 43

RESULT 131

ABG78373

ID ABG78373 standard; protein; 503 AA.

AC ABG78373;

DT 29-AUG-2003 (revised)

DT 15-NOV-2002 (first entry)

```
XX DE Human prepromemapsin 2/plasmid derived sequence.
XX KM Human; enzyme; memapsin 2; aspartic protease; beta secretase;
XX KW degenerative disease; Alzheimer's disease; amyloid precursor protein;
XX KM APP; neuroprotective; nontropic; inhibitor;
XX KW substrate side-chain preference.
XX OS Homo sapiens.
XX OS Enterobacteria phage T7.
XX PN WO200253594-A2.
XX PD 11-JUL-2002.
XX PF 28-DEC-2001; 2001WO-US050826.
XX PR 28-DEC-2000; 2000US-0258705P.
XX PR 14-MAR-2001; 2001US-025756P.
XX XX
XX PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX PA (UNIT ) UNIV ILLINOIS FOUND.
XX PI Tang JUN, Koelsch G, Ghosh AK;
XX DR WPI; 2002-619088/66.
XX XX
XX PT New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's
XX PT disease.
XX PS Disclosure; Fig 8; 74pp; English.
XX XX
XX CC The invention relates to an inhibitor of catalytically active memapsin 2
XX CC (an aspartic protease which can cleave at beta secretase sites), which
XX CC binds to the active site of memapsin 2 defined by the presence of two
XX CC catalytic aspartic residues and substrate binding cleft. Also included is
XX CC a method of determination of the substrate side-chain preference in
XX CC memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2
XX CC substrates with memapsin 2, and determining the sub-site preference of
XX CC memapsin 2 by determining relative initial hydrolysis rates of the
XX CC mixture of memapsin 2 substrates; or (b) preparing a combinatorial
XX CC library of memapsin 2 inhibitors containing a base sequence taken from
XX CC OM99-2 (Glu-Val-Ala-Leu-Ala-Glu-Phe), probing the library of
XX CC inhibitors with memapsin 2 which binds to several inhibitors to generate
XX CC several bound memapsin 2, and detecting the bound inhibitors to generate
XX CC antibody raised to memapsin 2, and an alkaline phosphatase conjugated
XX CC secondary antibody. The inhibitors may be used in the manufacture of a
XX CC medicament for the treatment of Alzheimer's disease since memapsin 2 may
XX CC be involved in the cleavage of amyloid precursor protein (APP), and for
XX CC determining the substrate side-chain preference in memapsin 2 sub-sites.
XX CC The present sequence represents human prepromemapsin 2 fused to vector
XX CC derived sequences. (Updated on 29-AUG-2003 to standardise OS field)
XX XX
XX SQ Sequence 503 AA;

Query Match 100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPISGIGCAPLGL 41
DB 24 TQHGIRLPISGIGCAPLGL 43

RESULT 132
AAU99489
ID AAU99489 standard; protein; 503 AA.
XX
XX AC AAU99489;
XX
XX DT 07-OCT-2002 (first entry)
XX
XX DE Pro-memapsin 2 encoded by plasmid construct pET-11a-memapsin 2.
```

```
XX XX
XX KM Human; memapsin 2; beta secretase; aspartic protease; APP;
XX KW beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;
XX KM neuroprotective; nontropic; enzyme; mutant; mutein.
XX OS Homo sapiens.
XX OS Synthetic.
XX PN US2002049303-A1.
XX PD 25-APR-2002.
XX PF 28-FEB-2001; 2001US-00796264.
XX PR 28-JUN-1999; 99US-0141363P.
XX PR 30-NOV-1999; 99US-0168060P.
XX PR 25-JAN-2000; 2000US-0177836P.
XX PR 27-JAN-2000; 2000US-0178368P.
XX PR 27-JUN-2000; 2000US-00604608.
XX XX
XX PA (TANG/) TANG J J N.
XX PA (LINX/) LIN X.
XX PA (KOEL/) KOELSCH G.
XX PA (HONG/) HONG L.
XX PI Tang JUN, Lin X, Koelsch G, Hong L;
XX DR WPI; 2002-507280/54.
XX XX
XX PT New recombinant catalytically active memapsin 2, useful to screen for
XX PT inhibitors of memapsin 2 which can be used to prevent and treat
XX PT Alzheimer's disease.
XX PS Example 3; Fig 1; 44pp; English.
XX XX
XX CC The present invention relates to methods for the production of purified,
XX CC recombinant catalytically active, memapsin 2 (beta secretase). Memapsin
XX CC 2, a member of the aspartic protease family, cleaves beta-amyloid
XX CC precursor protein (APP) found in amyloid plaques. The recombinant
XX CC memapsin 2 is useful for identifying inhibitors of memapsin 2 in the
XX CC design of drugs for the treatment and/or prevention of Alzheimer's
XX CC disease. The recombinant memapsin 2 can be used to immunise against
XX CC Alzheimer's disease. The present sequence represents pro-memapsin 2
XX CC encoded by plasmid construct pET-11a-memapsin 2
XX XX
XX SQ Sequence 503 AA;

Query Match 100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPISGIGCAPLGL 41
DB 24 TQHGIRLPISGIGCAPLGL 43

RESULT 133
ABG76102
ID ABG76102 standard; protein; 503 AA.
XX
XX AC ABG76102;
XX
XX DT 01-MAY-2003 (first entry)
XX
XX DE Human memapsin 2/T7 fusion protein.
XX
XX KW Human; memapsin 2; beta-secretase; beta-amyloid precursor protein;
XX KW beta-amyloid peptide; Alzheimer's disease; nontropic; neuroprotective;
XX KW enzyme; T7.
XX
XX OS Homo sapiens.
XX OS Enterobacteria phage T7.
XX OS Synthetic.
```

```

XX Key Location/Qualifiers
PH Peptide 1..15
FT /note= "Vector derived (T7) residues"
FT Protein 16..503
FT /label= Memapsin_2
XX
PN US2002164760-A1.
XX
XX 07-NOV-2002.
XX
XX 28-FEB-2001; 2001US-00795903.
XX
XX 28-JUN-1999; 99US-0141363P.
XX 30-NOV-1999; 99US-0168060P.
XX 25-JAN-2000; 2000US-0177836P.
XX 27-JAN-2000; 2000US-0178368P.
XX 08-JUN-2000; 2000US-0210292P.
XX 27-JUN-2000; 2000US-00604608.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
XX Lin X, Koelsch G, Tang JUN;
XX
XX WPI; 2003-255218/25.
XX
XX New purified recombinant catalytically active memapsin 2 (beta-
PT secretase), useful for designing and screening of specific inhibitors for
PT the diagnosis, prevention and/or treatment of Alzheimer's disease.
XX
XX Disclosure; Fig 1; 44pp; English.
XX
XX The invention relates to a purified recombinant catalytically active
XX memapsin 2, a beta-secretase which produces the beta-amyloid peptide from
XX the beta amyloid precursor protein. Also included are producing the above
XX memapsin 2 (comprising refolding the recombinant memapsin 2 under
XX conditions which dissociate and then slowly refold the enzyme into a
XX catalytically active form), isolating inhibitors of cleavage by memapsin
XX 2 (comprising adding to one or more potential inhibitors the memapsin 2
XX and a substrate for memapsin 2 and screening for decreased cleavage of
XX the substrate by the inhibitors), designing or obtaining inhibitors of
XX the memapsin 2 (comprising modelling an inhibitor based on the
XX crystallographic coordinates of memapsin 2 or the parameters given in the
XX specification), a database comprising binding properties and chemical
XX structures of compounds designed or screened by the method above and
XX treating or preventing Alzheimer's disease (comprising administering to a
XX patient an inhibitor of memapsin 2 which binds to the active site of the
XX memapsin 2 defined by the presence of 2 catalytic aspartic residues and
XX substrate binding cleft or immunising an individual with the above
XX memapsin 2 to elicit an amount of antibodies to reduce the cleavage by
XX memapsin 2). The memapsin 2 is useful in designing and
XX screening of specific inhibitors for the diagnosis, prevention and/or
XX treatment of Alzheimer's disease. The present sequence represents a
XX memapsin 2 produced by an expression vector and containing vector derived
XX (T7 promoter) amino acids at the N-terminus
XX
XX Sequence 503 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 503;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 22 TQHGIRLPRLRSGAGAPLGL 41
XX |||||
XX 24 TQHGIRLPRLRSGAGAPLGL 43
XX
XX RESULT 134
XX ADA74818
XX ID ADA74818 standard; protein; 503 AA.
XX AC ADA74818;
XX

```

```

DT 20-NOV-2003 (first entry)
XX
XX Plasmid construct protein of human memapsin 2-containing vectors.
XX
XX memapsin 2; beta-secretase; amyloid precursor protein; APP;
XX aspartic proteinase 2; ASP2; neurotrophic; neuroprotective;
XX Alzheimer's disease; human; vector; pET-11amemapsin 2-T1;
XX pET-11amemapsin 2-T2; enzyme.
XX
XX Synthetic.
XX OS Homo sapiens.
XX OS Enterobacteria phage T7.
XX
XX Key Location/Qualifiers
PH Region 1..15
FT /note= "Region derived from pET-11a vector"
FT Region 1..13
FT /note= "T7 promoter region"
FT Region 16..456
FT /note= "Promemapsin 2-T1"
FT Region 16..421
FT /note= "Promemapsin 2-T2"
XX
XX US6545127-B1.
XX
XX 08-APR-2003.
XX
XX 27-JUN-2000; 2000US-00604608.
XX
XX 28-JUN-1999; 99US-0141363P.
XX 30-NOV-1999; 99US-0168060P.
XX 25-JAN-2000; 2000US-0177836P.
XX 27-JAN-2000; 2000US-0178368P.
XX 08-JUN-2000; 2000US-0210292P.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
XX Tang JUN, Lin X, Koelsch G, Hong L;
XX
XX WPI; 2003-566587/53.
XX
XX Novel memapsin 2 protein that cleaves a beta-secretase site of an amyloid
PT precursor protein is useful in the design and screening of specific
PT inhibitors for treating and preventing Alzheimer's disease.
XX
XX Claim 1; Fig 1; 44pp; English.
XX
XX The invention relates to a novel method which comprises the production of
XX purified, catalytically active, recombinant memapsin 2 (beta-secretase)
XX protein where the memapsin protein is expressed in a bacterial cell and
XX cleaves the beta-secretase site of an amyloid precursor protein (APP).
XX Memapsin 2, also known as aspartic proteinase 2 (ASP2), belongs to the
XX aspartic protease family and demonstrates neurotrophic and neuroprotective
XX activities. The protein of the invention may be useful in the design and
XX screening of specific inhibitors which are useful in treating and
XX preventing Alzheimer's disease. The current sequence is that of the
XX plasmid construct protein of the human memapsin 2-containing vectors pET-
XX 11amemapsin 2-T1 and pET-11amemapsin 2-T2 of the invention.
XX
XX Sequence 503 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 503;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 22 TQHGIRLPRLRSGAGAPLGL 41
XX |||||
XX 24 TQHGIRLPRLRSGAGAPLGL 43
XX
XX RESULT 135
XX AAM52697
XX ID AAM52697 standard; protein; 509 AA.
XX

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XX AC AAMS2697;
XX XX
XX DT 26-FEB-2002 (first entry)
XX DE FLAG-caged human beta-secretase.
XX
XX KW Human; beta-secretase; FLAG tag; inhibitor; amine compound;
XX KW beta amyloid protein production; head injury; spinal injury;
XX KW amyloid precursor protein alpha secretion; nerve damage;
XX KW meningitis sequelae; cerebral paralysis; memory disorder; mental disease;
XX KW nootropic; neuroprotective; cerebroprotective.
XX
XX OS Homo sapiens.
XX XX Synthetic.
XX FH Key
XX FT Region
XX FT 502.509
XX FT /label= FLAG_tag
XX
XX PN WO200187293-A1.
XX
XX PD 22-NOV-2001.
XX
XX PP 18-MAY-2001; 2001WO-JP004144.
XX
XX PR 19-MAY-2000; 2000JP-00152758.
XX
XX PA (TAKE ) TAKEDA CHEM IND LTD.
XX
XX PI Miyamoto M, Matsui J, Fukumoto H, Tarui N;
XX
XX DR WPI; 2002-055640/07.
XX DR N-PSDB; ABA02406.
XX
XX PS Beta-secretase inhibitor used for treating e.g. Alzheimer's disease and
XX PT injury to brain or spine, and neurodegeneration, comprises amine
XX PT compound.
XX
XX PS Example; Page 79-81; 86pp; Japanese.
XX
XX CC The invention relates to novel amine compounds which are beta-secretase
XX CC inhibitors. The beta-secretase compounds also have the ability to promote
XX CC amyloid precursor protein alpha secretion and to inhibit beta amyloid
XX CC protein production. The beta-secretase inhibitors of the invention can be
XX CC used for treating head or spinal injuries, nerve damage, sequelae of
XX CC meningitis, cerebral paralysis, memory disorders and mental diseases. The
XX CC present sequence represents a FLAG-caged human beta-secretase used in
XX CC the exemplifications of the invention
XX
XX SQ Sequence 509 AA;

```

```

Query Match      100.0%; Score 104; DB 1; Length 509;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

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RESULT 136
ADJ71858
ID ADJ71858 standard; protein; 509 AA.
XX
XX AC ADJ71858;
XX
XX DT 06-MAY-2004 (first entry)
XX
XX DE Human protein SEQ ID NO:7.
XX
XX N-Substituted aryl carboxamide; neuroprotective; nootropic; neuroleptic;
XX KW muscular; antiparkinsonian; cerebroprotective; vasotropic; haemostatic;

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XX KW antiarteriosclerotic; antidepressant; neurodegeneration; nerve damage;
XX KW memory disorders; psychiatric disease; myopathy;
XX KW mild cognitive impairment; Alzheimer's disease; human.
XX
XX OS Homo sapiens.
XX
XX PN WO2004014843-A1.
XX
XX PP 19-FEB-2004.
XX
XX PR 07-AUG-2003; 2003WO-JP010045.
XX
XX PR 09-AUG-2002; 2002JP-00233231.
XX
XX PA (TAKE ) TAKEDA CHEM IND LTD.
XX
XX PI Uchikawa O, Aso K, Koike T, Tarui N, Hirai K;
XX
XX DR WPI; 2004-238691/22.
XX DR N-PSDB; ADJ71857.
XX
XX PT New/known aryl carboxamide derivatives as inhibitors of aspartic acid
XX PT protease and beta secretase for treating Alzheimer's disease,
XX PT neurodegeneration, nerve damage, memory disorders, psychiatric disease,
XX PT myopathy and cognitive impairment.
XX
XX PS Example 1; SEQ ID NO 7; 90pp; Japanese.
XX
XX CC The invention relates to novel N-substituted aryl carboxamide compounds
XX CC (I) and their salts. A compound of the invention has neuroprotective,
XX CC nootropic, neuroleptic, muscular-gen., antiparkinsonian,
XX CC cerebroprotective, vasotropic, haemostatic, antiarteriosclerotic, and
XX CC antidepressant activity. The compounds are used to prevent and treat
XX CC neurodegeneration, nerve damage, memory disorders, psychiatric disease,
XX CC Down's syndrome, senile dementia, Parkinson's disease, Creutzfeldt-Jacob
XX CC disease, amyotrophic lateral sclerosis, or Alzheimer's disease, including
XX CC chorea, multiple sclerosis, cerebrovascular disorders, cerebral embolism,
XX CC cerebral haemorrhage, cerebral arteriosclerosis, head injuries, spinal
XX CC injuries, post-encephalitic disease, cerebral palsy, depression, panic
XX CC disorder and schizophrenia. The present sequence is used in the
XX CC exemplification of the invention.
XX
XX SQ Sequence 509 AA;

```

```

Query Match      100.0%; Score 104; DB 1; Length 509;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

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RESULT 137
ADP74535
ID ADP74535 standard; protein; 509 AA.
XX
XX AC ADP74535;
XX
XX DT 12-AUG-2004 (first entry)
XX
XX DE Human indole compound-related beta-secretase protein.
XX
XX KW indole; neuroprotective; nootropic; antiparkinsonian; myopathy;
XX KW neuropathy; memory defect; senile dementia; amnesia; mental illness;
XX KW neurodegenerative disease; Alzheimer's; Creutzfeldt Jacob; CJD;
XX KW amyotrophic lateral sclerosis; Parkinson's; beta-secretase; enzyme;
XX KW human.
XX
XX OS Homo sapiens.
XX
XX PN JP2004149429-A.

```


XX 27-MAY-2004.
PD
XX 29-OCT-2002; 2002JP-00314580.
PF
XX 29-OCT-2002; 2002JP-00314580.
PR
XX (TAKE) TAKEDA CHEM IND LTD.
PA
XX WPI; 2004-405630/38.
DR
XX N-PSDB; ADP74534.
DR
XX Novel indole compound useful for treating senile dementia, Alzheimer's
PT disease, Creutzfeld-Jacob disease, amyotrophic lateral sclerosis,
PT Parkinson's disease, neuropathy, senile dementia, amnesia or myopathy.
XX
XX Example 119; SEQ ID NO 7; 67pp; Japanese.
PS
XX The invention relates to a novel indole compound. The compound of the
CC invention demonstrates neuroprotective, nootropic and antiparkinsonian
CC activities and may be useful as a preventive or therapeutic agent of
CC myopathy, neuropathy, defects of memory e.g. senile dementia or amnesia,
CC mental illness and neurodegenerative disease, including Alzheimer's
CC disease, Creutzfeld Jacob disease, amyotrophic lateral sclerosis or
CC Parkinson's disease. The peptide of the invention may be useful for
CC measuring the beta-secretase inhibitory activity of a test compound. The
CC current sequence is that of the human indole compound-related beta-
CC secretase protein of the invention.
XX
XX Sequence 509 AA;
SQ
XX
XX Query Match 100.0%; Score 104; DB 1; Length 509;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41
XX
XX RESULT 138
ABG09611
ID ABG09611 standard; protein; 969 AA.
XX
XX AC ABG09611;
XX
XX DT 13-FEB-2002 (first entry)
XX
XX DE Novel human diagnostic protein #962.
XX
XX KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder.
XX
XX OS Homo sapiens.
XX
XX PN WO200175067-A2.
XX
XX PD 11-OCT-2001.
XX
XX PF 30-MAR-2001; 2001WO-US008631.
XX
XX PR 31-MAR-2000; 2000US-00540217.
PR 23-AUG-2000; 2000US-00649167.
XX
XX PA (HYSE-) HYSEQ INC.
XX
XX PI Drmanac RT, Liu C, Tang YT;
XX
XX WPI; 2001-639362/73.
DR N-PSDB; AAS73798.
XX
XX New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations

PT responsible for genetic disorders or other traits and to assess
PT biodiversity.
XX
XX PS Claim 20; SEQ ID NO 39970; 103pp; English.
XX
XX XX The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping.
CC and in recombinant production of (II). The polynucleotides are also used
CC in diagnostics as expressed sequence tags for identifying expressed
CC genes. (II) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC useful for generating antibodies against it, detecting or quantitating a
CC polypeptide in tissue, as molecular weight markers and as a food
CC supplement. (II) and its binding partners are useful in medical imaging
CC of sites expressing (II). (I) and (II) are useful for treating disorders
CC involving aberrant protein expression or biological activity. The
CC polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
CC patent did not appear in the printed specification, but was obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
XX Sequence 969 AA;
SQ
XX
XX Query Match 100.0%; Score 104; DB 1; Length 969;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41
XX
XX RESULT 139
AAE06909
ID AAE06909 standard; protein; 476 AA.
XX
XX AC AAE06909;
XX
XX DT 23-OCT-2001 (first entry)
XX
XX DE Murine aspartyl protease 2b (murine Asp2b) protein.
XX
XX KW Mouse; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX
XX OS Mus musculus.
XX
XX PN WO200150829-A2.
XX
XX PD 19-JUL-2001.
XX
XX PF 09-MAY-2001; 2001WO-IB000799.
XX
XX PR 09-MAY-2001; 2001WO-IB000799.
XX
XX PA (BIEN/) BIENKOWSKI M J.
XX
XX PA (GURN/) GURNEY M E.
XX
XX PA (HEIN/) HEINRIKSON R L.
XX
XX PA (PARO/) PARODI L A.
XX
XX PA (YANR/) YAN R.
XX
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI; 2001-483072/52.
DR

PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
PS Claim 24; Page; 185pp; English.
XX
CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC Asp nucleic acids in *in vitro* assays and in Northern and Southern blots.
CC The present sequence is murine aspartyl protease 2 (murine Asp2), a
CC 'short' form designated as (murine Asp2b) related to the invention
SQ
SQ Sequence 476 AA;
Query Match 74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
QY 22 THGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
RESULT 140
AAE02619
ID AAE02619 standard; protein; 476 AA.
AC AAE02619;
XX
DT 10-AUG-2001 (first entry)
XX
DE Murine aspartyl protease 2b (asp 2b).
XX
KW Murine; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; antialzheimer's; aspartyl protease 2b; Asp 2b;
KW beta-secretase.
XX
OS Mus sp.
XX
PN WO200123533-A2.
XX
PD 05-APR-2001.
XX
PF 22-SEP-2000; 2000WO-US026080.
XX
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA) PHARMACIA & UPJOHN CO.
XX
PI Gurney M, Bienkowski MJ;
XX
DR WPI; 2001-290516/30.
XX
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
PS Example 3; Page; 189pp; English.

XX
CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is murine aspartyl protease 2b
CC (Asp 2b). Asp 2b has beta-secretase protease activity. Note: The present
CC sequence is not found in the specification but is derived from murine Asp
CC 2a referred as SEQ ID NO: 8 (AAE02583) and shown in Figure 4 of the
CC specification
SQ
SQ Sequence 476 AA;
Query Match 74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
QY 22 THGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
RESULT 141
ADO50480
ID ADO50480 standard; protein; 476 AA.
AC ADO50480;
XX
DT 29-JUL-2004 (first entry)
XX
DE Murine aspartyl protease (asp)-2(b).
XX
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; murine; enzyme.
XX
OS Mus musculus.
XX
PN US6737510-B1.
XX
PD 18-MAY-2004.
XX
PF 12-APR-2000; 2000US-00548373.
XX
PR 24-SEP-1999; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-387112/36.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 3; SEQ ID NO 73; 108pp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is
CC murine Asp-2 protein. This sequence is used to illustrate the method of
CC the invention.
SQ
SQ Sequence 476 AA;

Query Match	74.0%	Score 77	DB 1	Length 476
Best Local Similarity	80.0%	Pred. No. 87		
Matches 16	Conservative 0	Mismatches 4	Indels 0	Gaps 0
Qy	22 TQHGIRLPRLRSGLAGPPLGL 41			
Db	22 THLGIRLPRLRSGLAGPPLGL 41			
<p>RESULT 142</p> <p>ABJ25301 standard; protein; 489 AA.</p> <p>ABJ25301; 10-APR-2003 (first entry)</p> <p>Mouse BACE-interacting protein SEQ ID No 41.</p> <p>Neurotrophic; neuroprotective; beta-secretase; BACE-interacting; BACE; transmembrane; cytoplasmic region; Alzheimer's disease; gene therapy; transgenic animal; mouse; murine; enzyme.</p> <p>Unidentified.</p> <p>WO2002101232-A2.</p> <p>19-DEC-2002.</p> <p>07-JUN-2002; 2002WO-EP006667.</p> <p>12-JUN-2001; 2001EP-00202228.</p> <p>(VIAA-) VIAMS INTERUNIVERSITAIR INST BIOTECHNOG.</p> <p>Marjaux E, Dominguez-Tinland DI, Annaert W, De Strooper B;</p> <p>WPI; 2003-156973/15.</p> <p>New beta-secretase (BACE)-interacting polypeptide and nucleic acid, useful for screening, diagnosing and manufacturing a medicament for treating Alzheimer's disease, and in producing cell lines and transgenic animals.</p> <p>Example; Page 86-88; 90pp; English.</p> <p>The invention relates to a beta-secretase (BACE)-interacting polypeptide comprising a BACE interacting domain capable of interacting with the transmembrane and cytoplasmic region of BACE. The BACE-interacting protein and the nucleic acid encoding the protein are useful as a medicament, or for manufacturing a medicament, for treating Alzheimer's disease. The protein and the nucleic acid may also be used in screening and diagnosing Alzheimer's disease, and in producing cell lines and transgenic animals useful as models for the above mentioned disease. The polynucleotide sequences of the invention may also be used in gene therapy. This sequence represents a BACE-interacting protein of the invention</p> <p>Sequence 489 AA;</p> <p>Query Match 74.0%; Score 77; DB 1; Length 489;</p> <p>Best Local Similarity 80.0%; Pred. No. 87;</p> <p>Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;</p> <p>Qy 22 TQHGIRLPRLRSGLAGPPLGL 41</p> <p>Db 22 THLGIRLPRLRSGLAGPPLGL 41</p> <p>RESULT 143</p> <p>AAV88427 standard; protein; 501 AA.</p>				

XX	AAV8B427;
AC	
DT	03-AUG-2000 (first entry)
XX	
DE	Murine aspartyl protease 2 (a) (Asp2) amino acid sequence.
XX	
KW	Aspartyl protease; asparatase; amyloid precursor protein; APP; Asp 2;
KM	Alzheimer's disease; beta secretase site; mouse.
XX	
OS	Mus musculus.
XX	
PN	WO200017369-A2.
PD	30-MAR-2000.
XX	
PF	23-SEP-1999; 99WO-US020881.
XX	
PR	24-SEP-1998; 98US-0101594P.
XX	
PA	(PHAA) PHARMACIA & UPJOHN CO.
XX	
PI	Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX	
DR	WPI: 2000-303209/26.
XX	
PT	N-PSTDB; AAAI5664.
XX	
PT	New enzyme designated human aspartase useful in research into Alzheimer's
XX	
PT	Disease is capable of cleaving amyloid protein precursor at the beta
XX	
PT	secretase site to produce amyloid beta peptide.
XX	
PS	Claim 105; Fig 4; 183pp; English.
XX	
CC	This sequence represents the murine aspartyl protease 2 (Asp2) amino acid
XX	
CC	sequence. The invention relates to a protease (e.g. Asp2) capable of
XX	
CC	cleaving the beta secretase site of amyloid precursor protein (APP). The
XX	
CC	sequence contains a sequence encoding the amino acid sequence DTG and a
XX	
CC	mutated the APP gene causes an autosomal dominant form of Alzheimer's
XX	
CC	disease. APP localises to the cell surface membrane and have a single C-
XX	
CC	terminal transmembrane domain. Proteolytic processing of APP produces the
XX	
CC	amyloid beta protein, which is possibly very important in Alzheimer's
XX	
CC	disease. The invention includes a nucleotide sequence encoding the
XX	
CC	protease, a vector containing the nucleotide sequence, and a cell line
XX	
CC	comprising the vector. Methods for screening for inhibitors of beta
XX	
CC	secretase activity are also given in the invention. The human aspartase
XX	
CC	protein and nucleotide sequences and the methods for identifying
XX	
CC	inhibitors of the protease, are useful in the treatment of and research
XX	
CC	in to Alzheimer's disease
XX	
SO	Sequence 501 AA;
XX	
Query Match	74.0%; Score 77; DB 1; Length 501;
Best Local Similarity	80.0%; Pred. No. 87;
Matches 16; Conservative	0; Mismatches 4; Indels 0; Gaps 0
CY	22 TQHGIRLPKRSGLGAPPLG 41 22 THLGIRLPKRSGLGAPPLG 41
DB	
RESULT 144	
AAAY94768	
ID	AAI94768 standard; protein, 501 AA.
XX	
AC	AAI94768;
XX	
DT	12-FEB-2001 (first entry)
XX	
DE	Murine beta-secretase amino acid sequence.
XX	
KW	Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; mouse;
KM	Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective.

XX OS Mus sp.
XX PN WO200058479-A1.
XX PD 05-OCT-2000.
XX PF 23-MAR-2000; 2000WO-US007755.
XX PR 26-MAR-1999; 99US-00277229.
XX PA (AMGEN-) AMGEN INC.
XX PI Citron M, Vassar RJ, Bennett BD;
XX DR WPI; 2000-594643/56.
XX PT N-PSDB; AAA28279.
XX PS Claim 1; Fig 5; 145pp; English.
XX CC This invention relates to 3 nucleotide sequences encoding beta-secretase
XX CC proteins. Beta-secretase is an enzyme involved in the production of one
XX CC of the components of amyloid plaques involved in Alzheimer's disease. The
XX CC invention includes an expression vector comprising the nucleotide
XX CC sequence, a host cell comprising the expression vector, and a process for
XX CC producing the protein through culturing the transformed cells. Also
XX CC included in the invention are a polypeptide derivative of the beta-
XX CC secretase protein, a fusion protein comprising beta-secretase fused to a
XX CC heterologous amino acid sequence, and a method for modulating the levels
XX CC of beta-secretase polypeptide in a mammal comprising administering the
XX CC polynucleotide sequence. Beta-secretase exhibits neuroprotective and
XX CC neurotropic activity. The beta-secretase nucleotide sequence may be used to
XX CC map locations of the beta-secretase gene and related genes on chromosomes
XX CC and as hybridization probes in diagnostic assays to test for the presence
XX CC of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's
XX CC syndrome, and amyloid angiopathy. The nucleotide sequence may also be
XX CC used as anti-sense inhibitors of beta-secretase expression, in gene
XX CC therapy of Alzheimer's disease, and for the identification of compounds
XX CC that modulate beta-secretase activity. Antibodies to the beta-secretase
XX CC protein may be used for in vitro and in vivo diagnostic purposes to
XX CC detect the presence of beta-secretase polypeptide in a body fluid or cell
XX CC sample. The present sequence represents the murine beta-secretase protein
XX SQ Sequence 501 AA;
XX
XX Query Match 74.0%; Score 77; DB 1; Length 501;
XX Best Local Similarity 80.0%; Pred. No. 87;
XX Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
RESULT 145
AAV94769
ID AAV94769 standard; protein; 501 AA.
XX AC AAV94769;
XX DT 12-FEB-2001 (first entry)
XX DE Rat beta-secretase protein.
XX KW Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; rat;
XX KM Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.
XX OS Rattus sp.
XX PN WO200058479-A1.

XX PD 05-OCT-2000.
XX PF 23-MAR-2000; 2000WO-US007755.
XX PR 26-MAR-1999; 99US-00277229.
XX PA (AMGEN-) AMGEN INC.
XX PI Citron M, Vassar RJ, Bennett BD;
XX DR WPI; 2000-594643/56.
XX PT N-PSDB; AAA28280.
XX PS Claim 1; Fig 6; 145pp; English.
XX CC This invention relates to 3 nucleotide sequences encoding beta-secretase
XX CC proteins. Beta-secretase is an enzyme involved in the production of one
XX CC of the components of amyloid plaques involved in Alzheimer's disease. The
XX CC invention includes an expression vector comprising the nucleotide
XX CC sequence, a host cell comprising the expression vector, and a process for
XX CC producing the protein through culturing the transformed cells. Also
XX CC included in the invention are a polypeptide derivative of the beta-
XX CC secretase protein, a fusion protein comprising beta-secretase fused to a
XX CC heterologous amino acid sequence, and a method for modulating the levels
XX CC of beta-secretase polypeptide in a mammal comprising administering the
XX CC polynucleotide sequence. Beta-secretase exhibits neuroprotective and
XX CC neurotropic activity. The beta-secretase nucleotide sequence may be used to
XX CC map locations of the beta-secretase gene and related genes on chromosomes
XX CC and as hybridization probes in diagnostic assays to test for the presence
XX CC of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's
XX CC syndrome, and amyloid angiopathy. The nucleotide sequence may also be
XX CC used as anti-sense inhibitors of beta-secretase expression, in gene
XX CC therapy of Alzheimer's disease, and for the identification of compounds
XX CC that modulate beta-secretase activity. Antibodies to the beta-secretase
XX CC protein may be used for in vitro and in vivo diagnostic purposes to
XX CC detect the presence of beta-secretase polypeptide in a body fluid or cell
XX CC sample. The present sequence represents the rat beta-secretase protein
XX SQ Sequence 501 AA;
XX
XX Query Match 74.0%; Score 77; DB 1; Length 501;
XX Best Local Similarity 80.0%; Pred. No. 87;
XX Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
RESULT 146
AAU07204
ID AAU07204 standard; protein; 501 AA.
XX AC AAU07204;
XX DT 09-SEP-2004 (revised)
XX DT 24-OCT-2001 (first entry)
XX DE Mouse aspartyl protease 2a (Asp-2a).
XX KW Mouse; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;
XX KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;
XX KW beta-secretase; Alzheimer's disease.
XX OS Mus sp.
XX OS Unidentified.
XX FH Key
XX FT Peptide 1.21
Location/Qualifiers

PT1 /note= "Signal peptide"
FT Misc-difference 22..45
FT /note= "Pre-propeptide"
FT Misc-difference 46..57
FT /note= "Propeptide"
FT 58..501
FT /note= "Mature Aspartyl protease-2a"
FT Region 420..454
FT /note= "Alpha helical spacer region"
FT Domain 455..477
FT /note= "Transmembrane domain"
FT Domain 478..501
FT /note= "Cytoplasmic domain"
XX NO200149097-A2.
XX 12-JUL-2001.
XX
XX
XX 09-MAY-2001; 2001WO-1B000797.
XX
XX 09-MAY-2001; 2001WO-1B000797.
XX
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2001-502548/55.
XX N-PSDB; AAS11704.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Claim 24; Fig 4; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid protein precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC; and for reducing cellular production of amyloid beta (A-beta) from APP.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (A-beta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
CC nucleic acids in in vitro assays and in Northern and Southern blots. The
CC present sequence represents the amino acid sequence of mouse Asp-2a used
CC in the methods of the invention
CC
CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
XX
SQ Sequence 501 AA;
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
QY 22 THGIRLPRLSGAGAPLGL 41
Db 22 THGIRLPRLSGAGAPLGL 41

RESULT.147
AAE10631
ID AAE10631 standard; protein; 501 AA.
XX
XX AAE10631;
XX
XX 10-DEC-2001 (first entry)
XX
XX Murine aspartyl protease 2(a) [Asp2(a)] protein.
XX
XX Murine; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective.
XX
XX Mus musculus.
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-015543P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Bienkowski MJ, Gurney M;
XX WPI: 2001-444208/48.
XX N-PSDB; AAD17867.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 3; Fig 4; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is Asp2(a) protein
CC from murine
XX
SQ Sequence 501 AA;
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
QY 22 THGIRLPRLSGAGAPLGL 41
Db 22 THGIRLPRLSGAGAPLGL 41
RESULT 148
AAE06861
ID AAE06861 standard; protein; 501 AA.
XX

AC AAE06861;
XX
XX 23-OCT-2001 (first entry)
XX
DE Murine aspartyl protease 2a (murine Asp2a) protein.
XX
XX Mouse; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX neuroprotective; antisense therapy; gene therapy.
OS Mus musculus.
XX
XX WO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNE/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX DR WPI; 2001-483072/52.
XX DR N-PSDB; AAD13023.
XX
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX
XX PS Claim 24; Fig 4; 185pp; English.
XX
XX CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX CC precursor protein (APP) isoforms and their corresponding DNA molecules.
XX CC Human aspartyl proteases can act as beta-secretase proteases useful for
XX CC treating Alzheimer's disease. APP isoforms are useful for identifying
XX CC modulators of amyloid-beta peptide production, for use in designing
XX CC therapeutics for the treatment and prevention of Alzheimer's disease,
XX CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX CC and neuronal loss. APP isoforms are also used in methods for identifying
XX CC inhibitors and modulators of human Asp2 activity. The invention relates
XX CC to a method for identifying agents that modulate the activity of human
XX CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX CC as a means to screen in cellular assays for the inhibitors of beta- and
XX CC gamma- secretase. Hu-APP DNA fragments are useful as probes or primers in
XX CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX CC APP nucleic acids in in vitro assays and in Northern and Southern blots.
XX CC The present sequence is murine aspartyl protease 2 (murine Asp2), a
XX CC "long" form designated as (murine Asp2a) related to the invention
XX
SQ Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLAGPPLGL 41
DB 22 THLGIRLPURSGLAGPPLGL 41

RESULT 149
AAE02583
ID AAE02583 standard; protein; 501 AA.
XX
XX AAE02583;
AC

XX
XX 10-AUG-2001 (first entry)
XX
XX DE Murine aspartyl protease 2a (Asp 2a).
XX
XX XX Murine; alpha-secretase; amyloid precursor protein; APP; therapy;
XX KW Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp 2a;
XX KW beta-secretase.
XX
XX OS Mus sp.
XX
XX PN WO200123533-A2.
XX
XX PD 05-APR-2001.
XX
XX PF 22-SEP-2000; 2000WO-US026080.
XX
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99WO-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX PR 06-DEC-1999; 99US-0169232P.
XX
XX PA (PHAA) PHARMACIA & UPJOHN CO.
XX
XX PI Gurney M, Bienkowski MJ;
XX
XX DR WPI; 2001-290516/30.
XX DR N-PSDB; AAD06741.
XX
XX PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX PT protein, useful for the treatment of Alzheimer's disease.
XX
XX PS Example 3; Fig 4; 189pp; English.
XX
XX CC The present invention relates to enzymes for cleaving the alpha-
XX CC secretase site of the amyloid precursor protein (APP) and methods of
XX CC identifying those enzymes. The methods may be used to identify enzymes
XX CC that may be used to cleave the alpha-secretase cleavage site of the APP
XX CC protein. The enzymes may be used to treat or modulate the progress of
XX CC Alzheimer's disease. The present sequence is murine aspartyl protease 2a
XX CC (Asp 2a). Asp 2a has beta-secretase protease activity
XX
SQ Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLAGPPLGL 41
DB 22 THLGIRLPURSGLAGPPLGL 41

RESULT 150
AAB84948
ID AAB84948 standard; protein; 501 AA.
XX
XX AC AAB84948;
XX
XX DT 06-AUG-2001 (first entry)
XX
XX DE Mouse aspartic secretase-2 (MASP-2).
XX
XX KW Aspartic secretase-2; MASP-2; Alzheimer's disease; cancer; nootropic;
XX KW neuroprotective; cytostatic.
XX
XX OS Mus musculus.
XX
XX PN WO200136600-A1.
XX
XX PD 25-MAY-2001.
XX
XX PF 16-NOV-2000; 2000WO-US031583.

XX 16-NOV-1999; 99US-0165800P.
PR 15-NOV-2000; 2000US-00713158.
XX (SMIK) SMITHKLINE BEECHAM CORP.
PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
PI Zhu Y, Li X, Powell DJ, Christie G;
XX WPI; 2001-343813/36.
DR N-PSDB; AAF83845.
XX
PT New mouse aspartic secretase-2 polypeptide, useful for screening drugs
PT for the prevention and treatment of Alzheimer's disease and cancer.
XX
PS Claim 2; Page 23; 31pp; English.
XX
CC This represents a mouse aspartic secretase-2 (mASP-2) polypeptide. The
CC mASP-2 polypeptide can be expressed by standard recombinant methodology.
CC mASP-2 can be used to discover drugs for the prevention and treatment of
CC diseases including Alzheimer's, cancer, and prohoromone processing
CC dyfunctions, particular where knockout mice are used
XX
SQ Sequence 501 AA;
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
OY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
RESULT 151
AAU06605
ID AAU06605 standard; protein; 501 AA.
XX
AC AAU06605;
XX
DT 24-OCT-2001 (first entry)
XX
DE Mouse Aspartyl protease 2(a), Asp2(a).
XX
KM Mouse; Aspartyl protease; Asp2(a); beta-secretase; nootropic;
KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KM amyloid-beta; Abeta.
XX
OS Mus musculus.
XX
PN M0200149098-A2.
XX
PD 12-JUL-2001.
XX
PF 09-MAY-2001; 2001WO-IB000798.
XX
PR 09-MAY-2001; 2001WO-IB000798.
XX
PA (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (VANR/) VAN R.
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Van R;
XX WPI; 2001-502549/55.
DR N-PSDB; AAS11519.
XX
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.

XX Claim 24; Fig 4; 185pp; English.
PS
XX The invention relates to a purified polypeptide comprising a fragment of
CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2
CC transmembrane domain and the Asp2 protein, and where the polypeptide and
CC the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. The invention also details polynucleotides for the Asp proteins
CC and vectors expressing them, and a polypeptide (isoform of amyloid
CC protein precursor (APP)) comprising the amino acid sequence of an APP or
CC its fragment containing an APP cleavage site recognizable by a mammalian
CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl termini of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (Abeta) peptide production. APP is also useful in designing
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-sw-beta-secretase peptide sequence (NIDA), which is
CC associated with increased levels of Abeta processing is useful in assays
CC relating the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence is mouse Asp2(a)
XX
SQ Sequence 501 AA;
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
OY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
RESULT 152
ABB78592
ID ABB78592 standard; protein; 501 AA.
XX
AC ABB78592;
XX
DT 16-JUL-2002 (first entry)
XX
DE Mouse Asp-2(a) protein sequence SEQ ID NO:8.
XX
KM Mouse; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;
KM proteolytic.
XX
OS Mus musculus.
XX
PN GB2367060-A.
XX
PD 27-MAR-2002.
XX
PF 29-OCT-2001; 2001GB-00025934.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US0200881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX
PA (PHAA) PHARMACIA & UPJOHN CO.
PI Bienkowski MJ, Gurney M;
XX WPI; 2002-397167/43.
DR N-PSDB; ABL52459.
XX

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

PS Example 3; Fig 4; 182pp; English.

CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Gly-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV)
 CC comprising (III) or (III'); and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence represents mouse Asp-2(a) from the present invention

SQ Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;
 Best Local Similarity 80.0%; Pred. No. 87;
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TOHGIRLPFRSGIGAPPLGL 41

DB 22 THLGIRLPFRSGIGAPPLGL 41

RESULT 153
 ADJ94320
 XX ADJ94320 standard; protein; 501 AA.

AC ADJ94320;

DT 03-JUN-2004 (first entry)

DE Mouse aspartyl protease 2b, Asp-2b.

XX Mouse; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
 KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 KW neurotropic; neuroprotective; amyloid beta.

OS Mus musculus.

PN US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PA Guirney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

PI WPI; 2004-236722/22.

DR N-PSDB; ADJ94319.

PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.

PS Example 3; SEQ ID NO 8; 109pp; English.

CC The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptide, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated App695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. App695-SW
 CC or App695-SW-KK, or a V to F mutation at 642, e.g. App695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence represents an aspartyl protease
 CC of the invention.

SQ Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;
 Best Local Similarity 80.0%; Pred. No. 87;
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TOHGIRLPFRSGIGAPPLGL 41

DB 22 THLGIRLPFRSGIGAPPLGL 41

RESULT 154
 ADJ050416
 XX ADJ050416 standard; protein; 501 AA.

AC ADJ050416;

DT 29-JUN-2004 (first entry)

DE Murine aspartyl protease (Asp)-2.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
 KW Alzheimer's disease; gene therapy; murine; enzyme.

OS Mus musculus.

PN US6737510-B1.

PD 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-387112/36.
XX N-PSDB; ADO50415.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 3; SEQ ID NO 8; 108bp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is
CC murine Asp-2 protein. This sequence is used to illustrate the method of
CC the invention.
XX
SQ Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TQHGIRLPKRSGLGAPLGL 41
DB 22 THLGIRLPKRSGLGAPLGL 41

RESULT 155
ID ADR75329 standard; protein; 501 AA.

XX ADR75329;

DT 18-NOV-2004 (first entry)

DE Murine aspartyl protease (Asp)-2 enzyme.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; murine; enzyme.
XX

OS Mus musculus.

FN US2004166507-A1.

XX 26-AUG-2004.

PD 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

PA (BIEN/) BIENKOWSKI M J.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX WPI; 2004-624916/60.
XX DR N-PSDB; ADR75328.

PT Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.
XX
XX
PS Example 3; SEQ ID NO 8; 107bp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl
CC protease (Asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridize with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the murine Asp-2 enzyme. This sequence is used to
CC illustrate the method of the invention.

XX Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TQHGIRLPKRSGLGAPLGL 41
DB 22 THLGIRLPKRSGLGAPLGL 41

RESULT 156
ID AAU23068 standard; protein; 387 AA.

XX AAU23068;

DT 17-DEC-2001 (first entry)

DE Novel human enzyme polypeptide #154.

XX Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;
KM ligase; hyperproliferative disorder; immunodeficiency disorder;
KM autoimmune disorder; neurological disorder; metabolic disorder;
KM inflammatory disorder; cardiovascular disorder; reproductive disorder;
KM blood-related disorder; infectious disorder; cytostatic; anti arthritic;
KM nephrotropic; anticoagulant.

XX Homo sapiens.

OS WO200155301-A2.

FN 02-AUG-2001.

XX 17-JAN-2001; 2001WO-US001239.

XX 31-JAN-2000; 2000US-0179065P.

PR 04-FEB-2000; 2000US-0180628P.

PR 24-FEB-2000; 2000US-0184664P.

PR 02-MAR-2000; 2000US-0186350P.

PR 16-MAR-2000; 2000US-0189874P.

PR 17-MAR-2000; 2000US-0190076P.

PR 18-APR-2000; 2000US-0198123P.

PR 19-MAY-2000; 2000US-0205515P.

PR 07-JUN-2000; 2000US-0209467P.

PR 28-JUN-2000; 2000US-0214886P.

PR 30-JUN-2000; 2000US-0215135P.

PR 07-JUL-2000; 2000US-0216647P.

PR 07-JUL-2000; 2000US-0216880P.

PR 11-JUL-2000; 2000US-0217487P.

PR 11-JUL-2000; 2000US-0217496P.

PR 14-JUL-2000; 2000US-0218290P.

CC infectious disorders (e.g. Influenza). The polynucleotides of the
CC invention can also be used in gene therapy. AAU22915-AAU23814 represent
CC the novel human enzyme polypeptides of the invention. Note: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX

SO Sequence 387 AA;

Query Match 21.2%; Score 22; DB 1; Length 387;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPARGSGAPLG 40
Db 63 GVVVPYTGKWEGBELG 78

RESULT 157

AAU23069
ID AAU23069 standard; protein; 390 AA.

XX AAU23069;

DT 17-DEC-2001 (first entry)

XX Novel human enzyme polypeptide #155.

XX Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;
KW ligase; hyperproliferative disorder; immunodeficiency disorder;
KW autoimmune disorder; neurological disorder; metabolic disorder;
KW inflammatory disorder; cardiovascular disorder; reproductive disorder;
KW blood-related disorder; infectious disorder; cytotoxic; anti arthritic;
KW nephrotropic; anticoagulant.

XX Homo sapiens.

OS WC0200155301-A2.

XX 02-AUG-2001.

PF 17-JAN-2001; 2001WO-US001239.

XX 31-JAN-2000; 2000US-0179065P.
PR 04-FEB-2000; 2000US-0180628P.
PR 24-FEB-2000; 2000US-0184684P.
PR 02-MAR-2000; 2000US-0186350P.
PR 16-MAR-2000; 2000US-0189874P.
PR 17-MAR-2000; 2000US-0190076P.
PR 18-APR-2000; 2000US-0198123P.
PR 19-MAY-2000; 2000US-0205515P.
PR 07-JUN-2000; 2000US-0209467P.
PR 28-JUN-2000; 2000US-0214886P.
PR 30-JUN-2000; 2000US-0215135P.
PR 07-JUL-2000; 2000US-0216647P.
PR 07-JUL-2000; 2000US-0216880P.
PR 11-JUL-2000; 2000US-0217487P.
PR 11-JUL-2000; 2000US-0217496P.
PR 14-JUL-2000; 2000US-0218290P.
PR 26-JUL-2000; 2000US-0220964P.
PR 26-JUL-2000; 2000US-0220964P.
PR 14-AUG-2000; 2000US-0224518P.
PR 14-AUG-2000; 2000US-0224519P.
PR 14-AUG-2000; 2000US-0225213P.
PR 14-AUG-2000; 2000US-0225214P.
PR 14-AUG-2000; 2000US-0225266P.
PR 14-AUG-2000; 2000US-0225267P.
PR 14-AUG-2000; 2000US-0225268P.
PR 14-AUG-2000; 2000US-0225270P.
PR 14-AUG-2000; 2000US-0225447P.
PR 14-AUG-2000; 2000US-0225757P.
PR 14-AUG-2000; 2000US-0225758P.
PR 14-AUG-2000; 2000US-0225759P.

PR 18-AUG-2000; 2000US-0226279P.
PR 22-AUG-2000; 2000US-0226681P.
PR 22-AUG-2000; 2000US-0226868P.
PR 23-AUG-2000; 2000US-0227182P.
PR 30-AUG-2000; 2000US-0228924P.
PR 01-SEP-2000; 2000US-0229343P.
PR 01-SEP-2000; 2000US-0229344P.
PR 01-SEP-2000; 2000US-0229345P.
PR 05-SEP-2000; 2000US-0229509P.
PR 05-SEP-2000; 2000US-0229513P.
PR 06-SEP-2000; 2000US-0230437P.
PR 06-SEP-2000; 2000US-0230438P.
PR 08-SEP-2000; 2000US-0231242P.
PR 08-SEP-2000; 2000US-0231243P.
PR 08-SEP-2000; 2000US-0231244P.
PR 08-SEP-2000; 2000US-0231413P.
PR 08-SEP-2000; 2000US-0231414P.
PR 08-SEP-2000; 2000US-0232080P.
PR 08-SEP-2000; 2000US-0232081P.
PR 12-SEP-2000; 2000US-0231968P.
PR 14-SEP-2000; 2000US-0233064P.
PR 14-SEP-2000; 2000US-0233397P.
PR 14-SEP-2000; 2000US-0233398P.
PR 14-SEP-2000; 2000US-0233399P.
PR 14-SEP-2000; 2000US-0232400P.
PR 14-SEP-2000; 2000US-0232401P.
PR 14-SEP-2000; 2000US-0233063P.
PR 14-SEP-2000; 2000US-0233064P.
PR 21-SEP-2000; 2000US-0233065P.
PR 21-SEP-2000; 2000US-0234223P.
PR 25-SEP-2000; 2000US-0234274P.
PR 25-SEP-2000; 2000US-0234997P.
PR 26-SEP-2000; 2000US-0234998P.
PR 26-SEP-2000; 2000US-0235484P.
PR 27-SEP-2000; 2000US-0235834P.
PR 27-SEP-2000; 2000US-0235836P.
PR 29-SEP-2000; 2000US-0236327P.
PR 29-SEP-2000; 2000US-0236367P.
PR 29-SEP-2000; 2000US-0236368P.
PR 29-SEP-2000; 2000US-0236369P.
PR 29-SEP-2000; 2000US-0236370P.
PR 02-OCT-2000; 2000US-0236802P.
PR 02-OCT-2000; 2000US-0237037P.
PR 02-OCT-2000; 2000US-0237038P.
PR 02-OCT-2000; 2000US-0237039P.
PR 02-OCT-2000; 2000US-0237040P.
PR 13-OCT-2000; 2000US-0239935P.
PR 13-OCT-2000; 2000US-0239937P.
PR 20-OCT-2000; 2000US-0240960P.
PR 20-OCT-2000; 2000US-0241221P.
PR 20-OCT-2000; 2000US-0241785P.
PR 20-OCT-2000; 2000US-0241786P.
PR 20-OCT-2000; 2000US-0241787P.
PR 20-OCT-2000; 2000US-0241808P.
PR 20-OCT-2000; 2000US-0241809P.
PR 20-OCT-2000; 2000US-0241826P.
PR 01-NOV-2000; 2000US-0244617P.
PR 08-NOV-2000; 2000US-0246474P.
PR 08-NOV-2000; 2000US-0246475P.
PR 08-NOV-2000; 2000US-0246476P.
PR 08-NOV-2000; 2000US-0246477P.
PR 08-NOV-2000; 2000US-0246478P.
PR 08-NOV-2000; 2000US-0246523P.
PR 08-NOV-2000; 2000US-0246524P.
PR 08-NOV-2000; 2000US-0246525P.
PR 08-NOV-2000; 2000US-0246526P.
PR 08-NOV-2000; 2000US-0246527P.
PR 08-NOV-2000; 2000US-0246528P.
PR 08-NOV-2000; 2000US-0246532P.
PR 08-NOV-2000; 2000US-0246609P.
PR 08-NOV-2000; 2000US-0246610P.
PR 08-NOV-2000; 2000US-0246611P.

08-NOV-2000; 2000US-0246613P.
PR 17-NOV-2000; 2000US-0249207P.
PR 17-NOV-2000; 2000US-0249208P.
PR 17-NOV-2000; 2000US-0249209P.
PR 17-NOV-2000; 2000US-0249210P.
PR 17-NOV-2000; 2000US-0249211P.
PR 17-NOV-2000; 2000US-0249212P.
PR 17-NOV-2000; 2000US-0249213P.
PR 17-NOV-2000; 2000US-0249214P.
PR 17-NOV-2000; 2000US-0249215P.
PR 17-NOV-2000; 2000US-0249216P.
PR 17-NOV-2000; 2000US-0249217P.
PR 17-NOV-2000; 2000US-0249218P.
PR 17-NOV-2000; 2000US-0249245P.
PR 17-NOV-2000; 2000US-0249245P.
PR 17-NOV-2000; 2000US-0249264P.
PR 17-NOV-2000; 2000US-0249265P.
PR 17-NOV-2000; 2000US-0249297P.
PR 17-NOV-2000; 2000US-0249299P.
PR 17-NOV-2000; 2000US-0249300P.
PR 01-DEC-2000; 2000US-0250160P.
PR 01-DEC-2000; 2000US-0250391P.
PR 05-DEC-2000; 2000US-0251030P.
PR 05-DEC-2000; 2000US-0251988P.
PR 05-DEC-2000; 2000US-0256719P.
PR 06-DEC-2000; 2000US-0256719P.
PR 08-DEC-2000; 2000US-0251856P.
PR 08-DEC-2000; 2000US-0251856P.
PR 08-DEC-2000; 2000US-0251869P.
PR 08-DEC-2000; 2000US-0251989P.
PR 08-DEC-2000; 2000US-0251990P.
PR 11-DEC-2000; 2000US-0254097P.
PR 05-JAN-2001; 2001US-0259678P.
XX
XX
XX (HUMA-) HUMAN GENOME SCI INC.
PI Rosen CA, Barash SC, Ruben SM;
XX
XX WPI; 2001-465566/50.
DR N-PSDB; AAS40939.
XX
XX
XX Novel polypeptides and polynucleotides useful for diagnosing, preventing,
PT treating neural, immune system, muscular, reproductive, pulmonary,
PT cardiovascular, renal, proliferative disorders and cancerous diseases.
PS Claim 11; SEQ ID NO 1065; 1180bp; English.
XX
XX
XX The present invention relates to the isolation of novel human enzyme
CC polypeptides, and the cDNA (AAS40785-AAS41684) and genomic sequences
CC encoding them. The enzyme polypeptides of the invention may comprise the
CC functional classes of oxidoreductases, transferases, hydrolases, lyases,
CC isomerases or ligases. The sequences of the invention are useful in the
CC diagnosis, treatment, prevention and/or prognosis of a wide range of
CC disorders including hyperproliferative disorders (e.g. cancer),
CC immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g.
CC arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic
CC cardiovascular disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma),
CC (e.g. haemophilia), reproductive disorders (e.g. infertility) and
CC infectious disorders (e.g. influenza). The polynucleotides of the
CC invention can also be used in gene therapy. AAU22915-AAU23814 represent
CC the novel human enzyme polypeptides of the invention. Note: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
XX
XX Sequence 390 AA;

Query Match 21.2%; Score 22; DB 1; Length 390;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
QY 25 GIRLPURSGGAPLG 40

DB 66 GVYVPTQGMWGBELG 81

RESULT 158

ID ADC81581 standard; protein; 391 AA.

AC ADC81581;

DT 01-JAN-2004 (first entry)

DE Beta-secretase (1fkx) amino acid sequence SEQ ID NO:4.

KW human; BACE; modification; Pro33lys; pro-enzyme.

OS Unidentified.

PN W02003072733-A2.

FD 04-SEP-2003.

PF 21-FEB-2003; 2003WO-US005508.

PR 21-FEB-2002; 2002US-0358651P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Chou K, Howe JW;

DR WPI; 2003-712719/67.

PT BACE polypeptides having Pro33lys modification, useful in determining
PT possible mutations, which will inhibit enzyme activity, and in
PT determining potential active site for target molecules.

PS Disclosure; Fig 3; 38pp; English.

XX
XX
XX The present invention describes an isolated polypeptide (1) comprising or
CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),
CC and comprising human BACE having the modification Pro33lys. Also
CC described: (1) a composition comprising an active human BACE enzyme
CC comprising the pro-enzyme sequence of BACE having the modification
CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding
CC (1); (3) an isolated polynucleotide consisting or comprising of
CC nucleotides 70-1165 of a 1355-bp sequence (see ADC81562); (4) an
CC expression vector comprising the polynucleotide of (2), or a
CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
CC expression vector can produce the Pro33lys-BACE polypeptide when present
CC in a compatible host cell, when cultured under conditions that allow
CC production; (5) a recombinant host cell comprising the expression vector;
CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
CC polypeptide having Pro33lys modification may be used in determining
CC possible mutations, which will inhibit enzyme activity, and in
CC determining potential active site for target molecules. The vector
CC comprising the BACE polynucleotide is useful for producing recombinant
CC BACE polypeptides having Pro33lys modification. The present sequence
CC represents a beta-secretase amino acid sequence, which is used in the
CC exemplification of the present invention.
XX
XX
XX Sequence 391 AA;

Query Match 21.2%; Score 22; DB 1; Length 391;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPURSGGAPLG 40
DB 72 GVYVPTQGMWGBELG 87

RESULT 159
AD164643

ID ADI64643 standard; protein; 403 AA.
XX
AC ADI64643;
XX
DT 22-APR-2004 (first entry)
XX
DE Mature human beta-secretase (BACE) protein seq id 4.
XX
KM crystal; glycosylated human beta-secretase; BACE; human beta-secretase;
XX protein co-ordinate data.
XX
OS Homo sapiens.
XX
PN US2004014194-A1.
XX
PD 22-JAN-2004.
XX
PF 26-MAR-2003; 2003US-00400273.
XX
PR 27-MAR-2002; 2002US-0367937P.
XX
PA (SCHE) SCHERING CORP.
XX
PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;
PI Wong GT, Zhang L;
XX
PI WPI; 2004-167920/16.
XX
DR
XX
PT New crystal comprising a glycosylated, human beta-secretase polypeptide,
PT useful for determining the three-dimensional structure of beta-secretase
PT and other related proteins.
XX
PS Claim 5; SEQ ID NO 4; 107pp; English.
XX
CC The invention describes a crystal comprising a glycosylated, human beta-
CC secretase polypeptide characterised by structural coordinates comprising
CC a root mean square deviation of conserved residue backbone atoms of less
CC than 1.5 Angstrom when superimposed on backbone atoms described by
CC structural coordinates. The crystal is useful for determining the three-
CC dimensional structure of beta-secretase and other related proteins. This
CC is the amino acid sequence of a mature human beta-secretase (BACE)
CC protein.
XX
SQ Sequence 403 AA;
XX
QY Query Match 21.2%; Score 22; DB 1; Length 403;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
XX
DB 25 GIRLPLRSGLGAPLG 40
80 GVVVPTGKWEGLG 95
XX
RESULT 160
ADI64644
ID ADI64644 standard; protein; 408 AA.
XX
AC ADI64644;
XX
DT 22-APR-2004 (first entry)
XX
DE Mature human beta-secretase (BACE) protein seq id 5.
XX
KM crystal; glycosylated human beta-secretase; BACE; human beta-secretase;
XX protein co-ordinate data.
XX
OS Homo sapiens.
XX
PN US2004014194-A1.
XX
PD 22-JAN-2004.
XX

PF 26-MAR-2003; 2003US-00400273.
XX
XX 27-MAR-2002; 2002US-0367937P.
XX
XX (SCHE) SCHERING CORP.
XX
PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;
PI Wong GT, Zhang L;
XX
PI WPI; 2004-167920/16.
XX
DR
XX
PT New crystal comprising a glycosylated, human beta-secretase polypeptide,
PT useful for determining the three-dimensional structure of beta-secretase
PT and other related proteins.
XX
PS Claim 5; SEQ ID NO 5; 107pp; English.
XX
CC The invention describes a crystal comprising a glycosylated, human beta-
CC secretase polypeptide characterised by structural coordinates comprising
CC a root mean square deviation of conserved residue backbone atoms of less
CC than 1.5 Angstrom when superimposed on backbone atoms described by
CC structural coordinates. The crystal is useful for determining the three-
CC dimensional structure of beta-secretase and other related proteins. This
CC is the amino acid sequence of a mature human beta-secretase (BACE)
CC protein.
XX
SQ Sequence 408 AA;
XX
QY Query Match 21.2%; Score 22; DB 1; Length 408;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
XX
DB 25 GIRLPLRSGLGAPLG 40
85 GVVVPTGKWEGLG 100
XX
RESULT 161
ADI64640
ID ADI64640 standard; protein; 411 AA.
XX
AC ADI64640;
XX
DT 22-APR-2004 (first entry)
XX
DE Mature human beta-secretase (BACE) protein seq id 1.
XX
KM crystal; glycosylated human beta-secretase; BACE; human beta-secretase;
XX protein co-ordinate data.
XX
OS Homo sapiens.
XX
PN US2004014194-A1.
XX
PD 22-JAN-2004.
XX
PF 26-MAR-2003; 2003US-00400273.
XX
PR 27-MAR-2002; 2002US-0367937P.
XX
PA (SCHE) SCHERING CORP.
XX
PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;
PI Wong GT, Zhang L;
XX
PI WPI; 2004-167920/16.
XX
DR
XX
PT New crystal comprising a glycosylated, human beta-secretase polypeptide,
PT useful for determining the three-dimensional structure of beta-secretase
PT and other related proteins.
XX
PS Claim 5; SEQ ID NO 1; 107pp; English.
XX

CC The invention describes a crystal comprising a glycosylated, human beta-
CC secretase polypeptide characterised by structural coordinates comprising
CC a root mean square deviation of conserved residue backbone atoms of less
CC than 1.5 Angstrom when superimposed on backbone atoms described by
CC structural coordinates. The crystal is useful for determining the three-
CC dimensional structure of beta-secretase and other related proteins. This
CC is the amino acid sequence of a mature human beta-secretase (BACE).
CC protein.
XX
SQ Sequence 411 AA;

Query Match 21.2%; Score 22; DB 1; Length 411;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40
DB 82 GYVVPYTGKMEGLG 97

RESULT 162

ADJ57790
ID ADJ57790 standard; protein; 411 AA.

AC ADJ57790;

DT 06-MAY-2004 (first entry)

DE BACE WT R56KR57 protein.

KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX Alzheimer's disease.

OS Synthetic.

PN WO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI; 2004-169242/16.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX

PS Claim 10; SEQ ID NO 19; 145pp; English.

CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.
XX

SQ Sequence 411 AA;

Query Match 21.2%; Score 22; DB 1; Length 411;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40
DB 85 GYVVPYTGKMEGLG 100

RESULT 163

ADJ57791
ID ADJ57791 standard; protein; 411 AA.

AC ADJ57791;

DT 06-MAY-2004 (first entry)

DE BACE N-Q R56KR57noHs protein.

KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX Alzheimer's disease.

OS Synthetic.

PN WO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI; 2004-169242/16.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX

PS Claim 10; SEQ ID NO 20; 145pp; English.

CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE protein.
XX

SQ Sequence 411 AA;

Query Match 21.2%; Score 22; DB 1; Length 411;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40
DB 85 GYVVPYTGKMEGLG 100

RESULT 164

ABR61930
ID ABR61930 standard; protein; 414 AA.

AC ABR61930;

DT 12-SEP-2003 (first entry)

DE Human promemapsin 2 protein fragment.

KM Memapsin 1; nootropic; neuroprotective; memapsin 2; beta secretase;
XX beta-amyloid protein; Alzheimer's disease; promemapsin 2; human.

OS Homo sapiens.

PN WO2003039454-A2.

PD 15-MAY-2003.

KM	Human; aspartyl protease 1; Asp-1; noctropic; neuroprotective;
KW	aspartyl protease 2; Asp2; amyloid protein precursor; APP;
XX	beta-secretase; Alzheimer's disease.
XX	
OS	Homo sapiens.
OS	Enterobacteria phage T7.
XX	
PN	WO200149097-A2.
XX	
PD	12-JUL-2001.
XX	
PF	09-MAY-2001; 2001WO-1B000797.
XX	
FR	09-MAY-2001; 2001WO-1B000797.
XX	
PA	(BIEN/) BIENKOWSKI M J.
XX	(GURN/) GURNEY M E.
PA	(HEIN/) HEINRIKSON R L.
PA	(PARO/) PARODI L A.
XX	(YANR/) YAN R.
XX	
PI	Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX	
DR	WPI:2001-502548/55.
XX	
DR	N-PSDB; AAS11714.
XX	
PT	Novel purified polypeptide comprising fragment of mammalian aspartyl
PT	protease 2, lacking Asp2 transmembrane domain and retaining beta
PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT	activity.
XX	
PS	Example 9; Page 158-159; 185pp; English.
XX	
CC	The invention relates to a novel purified polypeptide comprising a
CC	fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC	Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC	and the fragment retain the beta-secretase activity of the mammalian Asp2
CC	protein. Also included is an isoform of amyloid protein precursor (APP)
CC	comprising the amino acid sequence of a APP or its fragment containing an
CC	APP cleavage site recognizable by a mammalian beta-secretase, and further
CC	comprising two lysine residues at the carboxyl terminus of the amino acid
CC	sequence of the mammalian APP or APP fragment. The polypeptides are used
CC	for assaying for modulators of beta-secretase activity; identifying
CC	agents that inhibit the APP processing activity of human Asp2 aspartyl
CC	protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC	; and for reducing cellular production of amyloid beta (Abeta) from APP.
CC	Agents identified by the above methods are useful for treating
CC	Alzheimer's disease; and for identifying modulators of amyloid-beta
CC	(Abeta) peptide production, for use in designing therapeutics for the
CC	treatment or prevention of Alzheimer's disease. Probes and primers
CC	derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
CC	nucleic acids in in vitro assays and in Northern and Southern blots. The
CC	present sequence represents the amino acid sequence of T7-caspase-caspase
CC	8-human-Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader
CC	sequence and cleavage site, and lacks the transmembrane domain. This
CC	construct was used for bacterial expression and purification of human
CC	Asp2a. (Updated on 11-SEP-2003 to standardise OS field)
XX	
XX	
SQ	Sequence 425 AA;
XX	
Query Match	21.2%; Score 22; DB 1; Length 425;
Best Local Similarity	31.2%; Pred. No. 1.8e+02;
Matches	5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
XX	
OY	25 GRLPLRSGGLGAPLG 40
XX	: :
Db	99 GYVYVYTOGRKEGSELG 114
XX	
RESULT 170	
AAE10641	
ID	AAE10641 standard; protein; 425 AA.
XX	

AC	AAE10641;
DT	10-DEC-2001 (first entry)
XX	
DE	T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) lacking TM domain.
XX	
KM	Human; aspartyl protease 1; Aspl; amyloid precursor protein; APP;
KW	Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KM	amyloid plaque; neuronal loss; proteolytic; nontropic; neuroprotective;
KW	T7-Caspase-Caspase 8 cleavage-Human-pro-Asp 2(a) protein.
XX	
OS	Homo sapiens.
OS	Synthetic.
PN	GB2357767-A.
XX	
PD	04-JUL-2001.
XX	
PF	22-SEP-2000; 2000GB-00023315.
PR	23-SEP-1999; 99US-00404133.
PR	23-SEP-1999; 99US-0155493P.
PR	23-SEP-1999; 99WO-US020881.
PR	13-OCT-1999; 99US-00416901.
PR	06-DEC-1999; 99US-0169232P.
PA	(PHMA) PHARMACIA & UPJOHN CO.
PI	Bienkowiecki MJ, Gurney M;
XX	
DR	WPI; 2001-444208/48.
DR	N-Psdb; AAD17877.
PT	
PT	Polypeptide comprising fragments of human aspartyl protease with amyloid precursor protein processing activity and alpha-secretase activity, for identifying modulators useful in treating Alzheimer's disease.
PS	Example 9; Page 129-130; 187pp; English.
CC	The patent discloses human aspartyl protease 1 (hu-Aspl) or modified Aspl proteins which lack transmembrane domain or amino terminal domain or cytoplasmic domain and retain alpha-secretase activity and amyloid protein precursor (APP) processing activity. The proteins of the invention are useful for assaying hu-Aspl alpha-secretase activity, which in turn is useful for identifying modulators of hu-Aspl alpha-secretase activity, where modulators that increase hu-Aspl alpha-secretase activity are useful for treating Alzheimer's disease (AD) which causes progressive dementia with consequent formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. Hu-Aspl protease substrate is useful for assaying hu-Aspl proteolytic activity, by contacting hu-Aspl protein with the substrate under acidic conditions and determining the level of hu-Aspl proteolytic activity. The present sequence is T7-Caspase- Caspase 8 cleavage-human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain. This sequence is generated from human Asp 2(a) protein by the addition of T7 tag and caspase 8 leader sequence at its N-terminal end and deletion of its C-terminal transmembrane domain
SO	Sequence 425 AA:
Query Match	21.2%; Score 22; DB 1; Length 425;
Best Local Similarity	31.2%; Pred. No. 1.8e+02;
Matches	5; Conservative 2; Mismatches 9; Indels 0; Gaps 0,
Cy	25 GIRLPNSGLGAPLG 40
DB	99 GVYVPYTQKWESEIG 114
RESULT 171	
AAE06871	
ID	AAE06871 standard; protein; 425 AA.
XX	
AC	AAE06871;

```

XX 23-OCT-2001 (first entry)
DT
XX T7-Caspase-Caspase 8 cleavage-Human-pro-Asp2(a) deltatm protein.
DE
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KW neuroprotective; antisense therapy; gene therapy;
KW caspase-caspase 8 cleavage-pro-Asp2(a) deltatm protein.
XX
OS Homo sapiens.
OS Synthetic.
PN WO200150829-A2.
XX
PD 19-JUL-2001.
XX
PF 09-MAY-2001; 2001WO-IB000799.
XX
PR 09-MAY-2001; 2001WO-IB000799.
XX
PA (BIEN/) BIENKOWSKI M J.
PA (GURNEY) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
DR WPI: 2001-483072/52.
DR N-PSDB; AAD13033.
XX
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
PS Example 9; Page 158-159; 185pp; English.
XX
CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present sequence is T7-Caspase-Caspase 8 cleavage-Human-pro Asp2;
CC protease 2a (Asp2a) deltatm protein which is obtained by the addition of
CC T7 tag and caspase 8 leader sequence at the N-terminal end and deletion
CC of the transmembrane domain at the C-terminal end of Hu-Asp2a. Human
CC Asp2a has beta-secretase activity
XX
SQ Sequence 425 AA;

```

```

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
QY 25 GIRLPLRSGLGAPLG 40
DQ 99 GVVVPTGTGKMEGLG 114
RESULT 172

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AAE02593
ID AAE02593 standard; protein; 425 AA.
XX
AC AAE02593;
XX
DT 10-AUG-2001 (first entry)
XX
DE T7-Caspase-Caspase 8-cleavage-human-pro-Asp-2(a) delta TM protein.
XX
KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; antiAlzheimer's; aspartyl protease 2a; Asp2a;
KW beta-secretase; caspase-caspase 8-Asp-2a delta TM.
XX
OS Homo sapiens.
OS Synthetic.
PN WO200123533-A2.
XX
PD 05-APR-2001.
XX
PF 22-SEP-2000; 2000WO-US026080.
XX
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHMA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney M, Bienkowski MJ;
XX
DR WPI: 2001-290516/30.
DR N-PSDB; AAD06751.
XX
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
PS Example 9; Page 157-158; 189pp; English.
XX
CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human Aspartyl protease 2a
CC (Asp-2a) caspase-caspase 8-deltatm protein which is obtained by deleting
CC the transmembrane domain and adding a T7-caspase leader sequence at the N
CC-terminal end. This sequence has beta-secretase protease activity
XX
SQ Sequence 425 AA;

```

```

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
QY 25 GIRLPLRSGLGAPLG 40
DQ 99 GVVVPTGTGKMEGLG 114
RESULT 173
AAU06615
ID AAU06615 standard; protein; 425 AA.
XX
AC AAU06615;
XX
DT 24-OCT-2001 (first entry)
XX
DE T7-Caspase-caspase-8-Human-pro-Asp 2(a) delta TM fusion protein.
XX
KW Human; Aspartyl protease; beta-secretase; nootropic; ASP2;
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW amyloid-beta; Abeta; T7-Caspase-caspase 8-Human-pro-Asp 2(a) delta TM.

```

XX Homo sapiens.
OS Synthetic.
XX Key
FT Peptide
FT Peptide
FT Peptide
FT Peptide
FT Cleavage-site
FT Protein
FT Protein
PN W0200149098-A2.
PD 12-JUL-2001.
XX 09-MAY-2001; 2001WO-IB000798.
XX 09-MAY-2001; 2001WO-IB000798.
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARODI/) PARODI L A.
XX (YANR/) YAN R.
XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502549/55.
XX N-PSDB; AAS11529.
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX Example 9; Page 158-159; 185pp; English.
XX The invention relates to a purified polypeptide comprising a fragment of
CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2
CC transmembrane domain and the Asp2 protein, and where the polypeptide and
CC the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. The invention also details polynucleotides for the Asp proteins
CC and vectors expressing them, and a polypeptide (isoform of amyloid
CC protein precursor (APP)) comprising the amino acid sequence of an APP or
CC its fragment containing an APP cleavage site recognizable by a mammalian
CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl termini of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (A-beta) peptide production. APP is also useful in designing
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-SW-beta-secretase peptide sequence (NMDA), which is
CC associated with increased levels of A-beta processing is useful in assays
CC relating the Alzheimer's disease. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting hu-Asp nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence is T7-Caspase-8-caspase 8-human-pro-
CC Asp 2(a) delta TM fusion protein which has an N-terminal T7 tag to aid
CC purification when expressed in E. coli, a Caspase leader sequence and a
CC caspase 8 cleavage signal to aid cleavage of the signal peptide
XX Sequence 425 AA;
SQ

Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
QY 25 GIRLPLRSGLCGAPLG 40
DB 99 GVVVPYTGKWEGLG 114
RESULT 174
ABB78602
ID ABB78602 standard; protein; 425 AA.
XX ABB78602;
AC ABB78602;
XX 16-JUL-2002 (first entry)
DT 16-JUL-2002 (first entry)
XX T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)deltaTM protein.
DE Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
XX amyloid precursor protein; APP.
XX Homo sapiens.
OS Homo sapiens.
XX GB2367060-A.
XX 27-MAR-2002.
PD 27-MAR-2002.
XX 29-OCT-2001; 2001GB-00025934.
XX 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX (PHAA) PHARMACIA & UPJOHN CO.
XX Blenkowski MJ, Gurney M;
XX WPI; 2002-397167/43.
XX N-PSDB; ABL52469.
XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX Example 9; Page 129-130; 182pp; English.
XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (I) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridizes under stringent conditions to the non-
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III') comprising a sequence that
CC hybridizes under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC comprising (III) or (III'); and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. hu-Asp1 has been localized to chromosome 21, while
CC hu-Asp2 has been localized to chromosome 11q23.3-24.1. The present
CC sequence represents T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)
CC deltaTM, which is given in an example from the present invention
XX Sequence 425 AA;
SQ


```

XX AAW59808;
AC
XX 26-OCT-1998 (first entry)
DT
XX
DE Partial amino acid sequence of human ASP2 (aspartic protease 2).
XX
KW Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;
KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;
KW prohormone processing.
XX
OS Homo sapiens.
XX
FH Key
FH Location/Qualifiers
FT Misc-difference 445
FT /note= "Stop codon specified in the protein"
FT Misc-difference 492
FT /note= "Stop codon specified in the protein"
FT Misc-difference 530
FT /note= "Stop codon specified in the protein"
FT Misc-difference 542
FT /note= "Stop codon specified in the protein"
FT Misc-difference 606
FT /note= "Stop codon specified in the protein"
FT Misc-difference 615
FT /note= "Stop codon specified in the protein"
FT Misc-difference 625
FT /note= "Stop codon specified in the protein"
FT Misc-difference 631
FT /note= "Stop codon specified in the protein"
FT Misc-difference 669
FT /note= "Stop codon specified in the protein"
FT Misc-difference 671
FT /note= "Stop codon specified in the protein"
FT Misc-difference 677
FT /note= "Stop codon specified in the protein"
FT Misc-difference 718
FT /note= "Stop codon specified in the protein"
FT Misc-difference 722
FT /note= "Stop codon specified in the protein"
FT Misc-difference 727
FT /note= "Stop codon specified in the protein"
FT Misc-difference 752
FT /note= "Stop codon specified in the protein"
FT Misc-difference 762
FT /note= "Stop codon specified in the protein"
FT Misc-difference 764
FT /note= "encoded by NNA"
FT Misc-difference 770
FT /label= "unknown"
FT /note= "encoded by TGN"
FT Misc-difference 776
FT /note= "encoded by GNC"
FT Misc-difference 778
FT /note= "encoded by NTT"
FT Misc-difference 779
FT /note= "Stop codon specified in the protein"
FT Misc-difference 780
FT /label= "unknown"
FT /note= "encoded by GNG"
FT Misc-difference 781
FT /label= "unknown"
FT /note= "encoded by NCC"
FT Misc-difference 782
FT /note= "encoded by NCT"
FT Misc-difference 783
FT /label= "unknown"
FT /note= "encoded by TNT"
FT Misc-difference 783
FT /label= "unknown"
FT /note= "encoded by ATN"

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FT Misc-difference 784
FT /label= "unknown"
FT /note= "encoded by TNA"
FT Misc-difference 785
FT /label= "unknown"
FT Misc-difference 790
FT /note= "encoded by TNC"
FT /label= "unknown"
FT /note= "encoded by NNG"
FT
FT EP855444-A2.
XX
XX 29-JUL-1998.
XX
XX 27-JAN-1998; 98EP-00300573.
XX
XX 28-JAN-1997; 97GB-00001684.
XX
XX (SMIK ) SMITHKLINE BEECHAM PLC.
XX (SMIK ) SMITHKLINE BEECHAM CORP.
XX
XX Powell DJ, Smith TS, Chapman CG, Murphy K;
XX WPI; 1998-389809/34.
XX N-PSDB; AAV41697.
XX
XX New nucleic acid encoding human aspartic protease 2 - used to treat,
XX prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone
XX processing.
XX
XX Disclosure; Page 9; 26pp; English.
XX
XX This is the amino acid sequence of the partial human ASP2 (aspartic
XX protease 2), used in the method of the invention. Agonists and
XX antagonists for ASP2 immunospecific antibodies are used to treat
XX conditions requiring increased or decreased activity or expression of
XX ASP2 respectively. ASP2 is used to treat and diagnose e.g. Alzheimer's
XX disease, cancer and prohormone processing and ASP2 or a fragment can be
XX used to induce an immune response against the above conditions
XX
XX Sequence 790 AA:
SQ
XX
XX Query Match 20.2%; Score 21; DB 1; Length 790;
XX Best Local Similarity 62.5%; Pred. No. 1.8e+02;
XX Matches 5; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
XX
XX DB 27 RLPRLRSGL 34
XX 570 RLPWRVSL 577
XX
XX RESULT 180
XX ADP83926
XX ID ADP83926 standard; peptide; 28 AA.
XX
XX ADP83926;
XX
XX 23-SEP-2004 (first entry)
XX
XX Human BACE1 isoform A protease domain SEQ ID NO:52.
XX
XX human, beta-site amyloid precursor protein cleaving enzyme 1;
XX beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; prodomain;
XX engineered cleavage site; protease domain; neuroprotective; nootropic;
XX gene therapy; Alzheimer's disease; Down's syndrome.
XX
XX Homo sapiens.
XX
XX WO2004056962-A2.
XX
XX 08-JUL-2004.
XX
XX 02-DEC-2003; 2003WO-US038314.
XX

```

XX 04-DEC-2002; 2002US-0430984P.
PR
XX
PA (SUNE-) SUNESIS PHARM INC.
XX
PI Ballinger M;
XX
DR WPI: 2004-507703/48.

XX New polypeptides for producing homogenously processed preparations of
PT beta site amyloid precursor protein-cleaving enzyme comprises a
PT prodomain, an engineered cleavage site and a protease domain.
XX

PS Claim 5; SEQ ID NO 52; 40pp; English.

CC The present invention describes a polypeptide (I) comprising in order
CC from the N-terminus to the C-terminus: (a) a prodomain comprising at
CC least 6 contiguous amino acids of the 16 amino acid sequence of SEQ ID
CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which
CC is the longest isoform of human beta-site amyloid precursor protein (APP)
CC cleaving enzyme 1 (BACE1), isoform A); (b) an engineered cleavage site;
CC and (c) a protease domain. (I) is capable of being cleaved at the
CC engineered cleavage site, and so releases a free protease domain that has
CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (I);
CC (2) a vector for expression of (1); and (3) a host cell expressing (1).
CC (1) has neuroprotective and nootropic activities, and can be used in gene
CC therapy. (I) can be used for producing preparations of homogenously
CC processed BACE that may be used for e.g. studying or treating diseases
CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is
CC located on chromosome 11, more specifically to 11q23.2-23.3. The present
CC sequence represents a human BACE1 isoform A protease domain amino acid
CC sequence, which is used in the exemplification of the present invention.
XX

SQ Sequence 28 AA;

Query Match 13.5%; Score 14; DB 1; Length 28;

Best Local Similarity 66.7%; Pred. No. 1.8e+02;

Matches 2; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 36 GAP 38

Db 9 GSP 11

Search completed: August 3, 2005, 11:48:47
Job time : 2 secs

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Wed Aug 3 11:59:44 2005

GenCore version 5.1.6
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OM:protein - protein search, using sw model

Run on: August 3, 2005, 11:51:13 ; Search time 0.001 Seconds
(without alignments)
72.620 Million cell updates/sec

Title: us-10-726-967a-1
Perfect score: 104
Sequence: 1 TONGIRLPLRSGLGAPLGL 20

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 8 seqs, 3631 residues

Total number of hits satisfying chosen parameters: 8

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 500 summaries

Database : rnpdb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	104	100.0	127	Q76KPO	Beta-site APP clea
2	104	100.0	501	BAE1_HUMAN	Beta-secretase 1 p
3	104	100.0	1	Q81YCG	Beta-site APP-clea
4	77	74.0	467	1 Q8C4F4	Mus musculus 0 day
5	77	74.0	501	1 BAE1_MOUSE	Beta-secretase 1 p
6	77	74.0	501	1 BAE1_RAT	Beta-secretase 1 p
7	77	74.0	501	1 Q8B0Y4	Mus musculus adult
8	41	39.4	532	1 Q9ULS1	KIAA1149 protein (

ALIGNMENTS

RESULT 1
Q76KPO PRELIMINARY: PRT, 127 AA.

AC Q76KPO: 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE Beta-site APP cleaving enzyme isoform I-127.
GN Name=BACE;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RL Tanahashi H.;
RA Submitted (Aug-2002) to the EMBL/GenBank/DBJ databases.
CC -1- SIMILARITY: Belongs to peptidase family A1.
DR EMBL; AB089958; BAC81826.1; -.
DR HSSP; P00797; 1BBS.

DR GO: GO:0009049; F:aspartic-type signal peptidase activity; IEA.
DR GO: GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR001461; Peptidase A1.
DR InterPro; IPR009119; Pept_A1_BACE.
DR InterPro; IPR009120; Pept_A1_BACE.
DR InterPro; IPR009007; Pept_AspArtic.
DR InterPro; IPR001969; Pept_Asp_AS.
DR Pfam; PF000026; Asp_1.
DR PRINTS; PR01816; BACE1.
DR PRINTS; PR01815; BACEFAMILY.
DR PROSITE; PS00141; ASP_PROTEASE; 1.
DR Aspartyl protease; Hydrolase; Protease.
KW SEQUENCE 127 AA; 13939 MW; C657354CBE172DC4 CRC64;
SQ

Query Match 100.0%; Score 104; DB 1; Length 127;
Best Local Similarity 100.0%; Pred. No. 0.77;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 2
BAE1_HUMAN STANDARD: PRT, 501 AA.
ID P56817; Q9BYG9; Q9BYC0; Q9BYC1; Q9UTR5;
AC 30-MAY-2000 (Rel. 39, Created)
DT 30-MAY-2000 (Rel. 39, Last sequence update)
DT 25-OCT-2004 (Rel. 45, Last annotation update)
DE Beta-secretase 1 precursor (EC 3.4.23.46) (Beta-site APP cleaving enzyme 1) (Beta-site amyloid precursor protein cleaving enzyme 1) (Aspartyl protease 2) (Asp 2) (ASP2) (Membrane-associated aspartic protease 2) (Memapsin-2).
GN Name=BACE1; Synonyms=BACE;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM A).
RC TISSUE=Brain;
RX MEDLINE=20002972; PubMed=10531052; DOI=10.1126/science.286.5440.735;
RA Vasar R., Bennett B.D., Babu-Khan S., Kahn S., Mendiaz E.A., Denis P., Teplow D.B., Ross S., Amarante P., Loeloff R., Luo Y., Fisher S., Fuller J., Edenson S., Lile J., Jarosinski M.A., Biere A.L., Curran E., Burgess T., Louis J.-C., Collins F., Treanor J., Rogers G., Citron M.;
RT "Beta-secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE.";
RL Science 286:735-741(1999).
RN [2]
RP SEQUENCE FROM N.A. (ISOFORM A), SEQUENCE OF 46-68, AND CHARACTERIZATION.
RC TISSUE=Brain;
RX MEDLINE=20051771; PubMed=10591214; DOI=10.1038/990114;
RA Sinha S., Anderson J.P., Barbour R., Basi G.S., Caccavello R., Davis D., Doan M., Doves H.F., Frigon N., Hong J., Jacobson-Croak K., Jewett N., Keim P., Knops J., Lieberburg I., Power M., Tan H., Tacsuno G., Tung J., Schenk D., Seubert P., Stuenkel S.M., Wang S., Walker D., Zhao J., McConlogue L., Varghese J.;
RT "Purification and cloning of amyloid precursor protein beta-secretase from human brain.";
RL Nature 402:537-540(1999).
RN [3]
RP SEQUENCE FROM N.A. (ISOFORM A).
RX MEDLINE=20057170; PubMed=10591213; DOI=10.1038/990107;
RA Yan R., Bienkowska M.J., Shuck M.E., Miao H., Torry M.C., Pauley A.M., Brashers J.R., Strassman N.C., Mathews W.R., Buhl A.E., Carter D.B., Tomaseill A.G., Parodi L.A., Heinrichson K.L., Gunney M.E.;
RT "Membrane-anchored aspartyl protease with Alzheimer's disease beta-secretase activity.";
RL Nature 402:533-537(1999).

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RN [4]
RP SEQUENCE FROM N.A. (ISOFORM A).
RX MEDLINE=20120043; PubMed=10656250; DOI=10.1006/mcne.1999.0811;
RA Hussain I., Powell D.J., Howlett D.R., Tew D.G., Meek T.D.,
RA Chapman C., Gloger I.S., Murphy K.E., Southan C.D., Ryan D.M.,
RA Smith T.S., Simmons D.L., Walsh F.S., Dingwall C., Christie G.,
RT "Identification of a novel aspartic proteinase (Asp 2) as beta-
RT secretase.";
RL Mol. Cell. Neurosci. 14:419-427(1999).
RN [5]
RP SEQUENCE FROM N.A. (ISOFORM B).
RC TISSUE=Brain, and Pancreas;
RA Michel B., De Pietri Tonelli D., Zaccchetti D., Keller P.,
RT "New beta-site APP cleaving enzyme isoform (BACE-1b) obtained from
RT human brain and pancreas.";
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
RN [6]
RP SEQUENCE FROM N.A. (ISOFORM C).
RC TISSUE=Pancreas;
RA Zaccchetti D., De Pietri Tonelli D., Schnurbus R.,
RT "New beta-site APP cleaving enzyme isoform (BACE-1c) obtained from
RT human pancreas.";
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
RN [7]
RP SEQUENCE FROM N.A. (ISOFORMS B; C AND D).
RC TISSUE=Brain;
RX MEDLINE=21408467; PubMed=11516562; DOI=10.1016/S0304-3940(01)01912-7;
RA Tanahashi H., Tabira T.,
RT "Three novel alternatively spliced isoforms of the human beta-site
RT amyloid precursor protein cleaving enzyme (BACE) and their effect on
RT Neurosci. Lett. 307:9-12(2001).
RN [8]
RP SEQUENCE OF 14-501 FROM N.A. (ISOFORM A), AND CHARACTERIZATION.
RX MEDLINE=20144060; PubMed=10677483; DOI=10.1073/pnas.97.4.1456;
RA Lin X., Kogelsch G., Wu S., Downs D., Dashti A., Tang J.,
RT "Human aspartic protease memapsin 2 cleaves the beta-secretase site of
RT beta-amyloid precursor protein.";
RL Proc. Natl. Acad. Sci. U.S.A. 97:1456-1460(2000).
RN [9]
RP DISULFIDE BONDS.
RX MEDLINE=21950860; PubMed=11953458;
RA Fischer F., Molinari M., Bodendorf U., Paganetti P.,
RT "The disulphide bonds in the catalytic domain of BACE are critical but
RT not essential for amyloid precursor protein processing activity.";
RL J. Neurochem. 80:1079-1088(2002).
RN [10]
RP FUNCTION: Responsible for the proteolytic processing of the
RN amyloid precursor protein (APP). Cleaves at the amino terminus of
RN the A-beta peptide sequence, between residues 671 and 672 of APP,
RN leads to the generation and extracellular release of beta-cleaved
RN soluble APP, and a corresponding cell-associated carboxy-terminal
RN fragment which is later released by gamma-secretase.
RN [11]
RP CATALYTIC ACTIVITY: Broad endopeptidase specificity. Cleaves Glu-
RN Val-Asn-Leu-I-Asp-Ala-Glu-Phe in the Swedish variant of
RN Alzheimer's amyloid precursor protein.
RN [12]
RP SUBCELLULAR LOCATION: Type I membrane protein.
RN [13]
RP ALTERNATIVE PRODUCTS:
RN Event=Alternative splicing; Named isoforms=4;
RN Name=A; Synonym=BACE-1a, BAC-501;
RN IsoId=P56817-1; Sequence=Displayed;
RN Name=B; Synonym=BACE-1b, BACE-I-476;
RN IsoId=P56817-2; Sequence=VSP_005223;
RN Name=C; Synonym=BACE-1c, BACE-I-457;
RN IsoId=P56817-3; Sequence=VSP_005222;
RN Name=D; Synonym=BACE-1d, BACE-I-432;
RN IsoId=P56817-4; Sequence=VSP_005222, VSP_005223;
RN [14]
RP TISSUE SPECIFICITY: Brain.
RN [15]
RP SIMILARITY: Belongs to the peptidase A1 family.
RN [16]
RP This SWISS-PROT entry is copyright. It is produced through a collaboration
RN between the Swiss Institute of Bioinformatics and the EMBL outstation
RN at the European Bioinformatics Institute. There are no restrictions on its
RN use by non-profit institutions as long as its content is in no way

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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; AF190725; AAF04142.1; -
DR EMBL; AF201468; AAF18982.1; -
DR EMBL; AF200343; AAF17079.1; -
DR EMBL; AF204943; AAF26357.1; -
DR EMBL; AF338816; AAK38374.1; -
DR EMBL; AF338817; AAK38375.1; -
DR EMBL; AB050436; BAB40931.1; -
DR EMBL; AB050437; BAB40932.1; -
DR EMBL; AB050438; BAB40933.1; -
DR EMBL; AF200193; AAF13715.1; -
DR PIR; A59090; A59090.
DR PDB; 1FKN; X-ray; A/B=56-446.
DR PDB; 1MAH; X-ray; A/B=56-446.
DR MEROPS; A01.004; -.
DR Genew; HGNC:933; BACE1.
DR H-InvDB; HIX0010165; -.
DR MIM; 604252; -.
DR GO; GO:0005887; C:integral to plasma membrane; TAS.
DR GO; GO:0008798; F:beta-aspartyl-peptidase activity; TAS.
DR GO; GO:0006508; F:proteolysis and peptidolysis; TAS.
DR InterPro; IPR009119; Pept_A1_BACE.
DR InterPro; IPR009120; Pept_A1_BACE.
DR InterPro; IPR001969; Pept_Asp_AS.
DR InterPro; IPR009007; Pept_AspArtic.
DR Pfam; PF00026; Asp_1.
DR PRINTS; PRO1816; BACE1.
DR PRINTS; PRO1815; BACEFAMILY.
DR PROSITE; PS00141; ASP_PROTEASE; 1.
DR 3D-structure; Alternative splicing; Glycoprotein; Hydrolyase; Signal;
KM Transmembrane; Zymogen.
FT FT STGNL 1 21
FT PROPEP 22 45
FT CHAIN 46 501
FT DOMAIN 22 457
FT TRANSMEM 458 478
FT DOMAIN 479 501
FT ACT SITE 93 93
FT ACT SITE 289 289
FT DISTFID 216 420
FT DISTFID 278 443
FT DISULFID 330 380
FT CARBOHYD 153 153
FT CARBOHYD 172 172
FT CARBOHYD 223 223
FT CARBOHYD 354 354
FT VARSPPLIC 146 189
FT VARSPPLIC 190 214
FT HELIX 61 63
FT STRAND 64 65
FT STRAND 67 70
FT TURN 71 73
FT STRAND 74 81
FT TURN 82 85
FT STRAND 86 93
FT TURN 94 95
FT STRAND 99 102
FT TURN 107 108
FT HELIX 115 117
FT TURN 119 120
FT STRAND 122 131
FT STRAND 136 147
FT TURN 149 150
FT STRAND 155 167
FT TURN 172 173

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FT STRAND 178 181
 FT HELIX 185 187
 FT TURN 192 193
 FT HELIX 197 204
 FT STRAND 211 215
 FT HELIX 224 229

Query Match 100.0%; Score 104; DB 1; Length 501;
 Best Local Similarity 100.0%; Pred. No. 0.77;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41
 Db 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 3
 Q81YC8 PRELIMINARY; PRT; 501 AA.
 AC 081YC8
 DT 01-MAR-2003 (TRENBLrel. 23, Created)
 DT 01-MAR-2003 (TRENBLrel. 23, Last sequence update)
 DT 01-MAR-2004 (TRENBLrel. 26, Last annotation update)
 DE Beta-site APP-cleaving enzyme 1, isoform A preproprotein.
 GN Name=BACE1;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OX NCBI_TaxID=9606;
 [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=22386257; PubMed=12477932; DOI=10.1073/pnas.242603899;
 RA Klausner R.L., Felingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.B.,
 RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carrincci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Boeck S.A., McGowan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Buterfield Y.S.,
 RA Krzyzanski M.I., Skalska U., Smallus D.E., Scherch A., Schein J.E.,
 RA Jones S.J., Maitra M.A.,
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences."
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RA Strauberg R.;
 RL Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
 CC -1- SIMILARITY: Belongs to peptidase family A1.
 DR EMBL: BC036084; AAH36084.1; -.
 DR HSSP: P56817; 1PKN.
 DR GO: GO:0005756; C:cytosol; ISS.
 DR GO: GO:0005794; C:Golgi apparatus; ISS.
 DR GO: GO:0016021; C:integral to membrane; ISS.
 DR GO: GO:0004190; F:aspartic-type endopeptidase activity; ISS.
 DR GO: GO:0050435; F:beta-amyloid metabolism; ISS.
 DR GO: GO:0006509; P:membrane protein ectodomain proteolysis; ISS.
 DR InterPro: IPR001463; Peptidase A1.
 DR InterPro: IPR009119; Pept_A1_BACE.
 DR InterPro: IPR009120; Pept_A1_BACE.
 DR InterPro: IPR009007; Pept_Aspartic.
 DR InterPro: IPR001969; Pept_Asp_AS.
 DR PRINTS: PR01816; BACE1.

DR PRINTS: PR01815; BACEFAMILY.
 DR PRINTS: PR00792; PERSIN.
 DR PROSITE: PS00141; ASP_PROTEASE; 1.
 KW Aspartyl protease; Hydrolase; Protease.
 SQ SEQUENCE 501 AA; 55823 MW; 768595CF5517EFB7 CRC64;

Query Match 100.0%; Score 104; DB 1; Length 501;
 Best Local Similarity 100.0%; Pred. No. 0.77;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41
 Db 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 4
 Q8CAF4 PRELIMINARY; PRT; 467 AA.
 AC 08CAF4
 DT 01-MAR-2003 (TRENBLrel. 23, Created)
 DT 01-MAR-2003 (TRENBLrel. 23, Last sequence update)
 DT 01-MAR-2004 (TRENBLrel. 26, Last annotation update)
 DE Mus musculus 0 day neonate cerebellum cDNA, RIKEN full-length enriched
 DE library, clone: C230037E16 product: beta-site APP cleaving enzyme, full
 DE insert sequence.
 GN Name=Bace1; Synonyms=Bace;
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
 RX MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
 RA Carrincci P., Hayashizaki Y.;
 RT "High-efficiency full-length cDNA cloning."
 RL Meth. Enzymol. 303:19-44(1999).
 [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
 RX MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
 RA RIKEN FANTOM Consortium;
 RT "Functional annotation of a full-length mouse cDNA collection."
 RL Nature 403:685-690(2001).
 [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
 RA The FANTOM Consortium;
 RT the RIKEN Genome Exploration Research Group Phase I & II Team;
 RT "Analysis of the mouse transcriptome based on functional annotation of
 RT 60,770 full-length cDNAs."
 RL Nature 420:563-573(2002).
 [4]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
 RX MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
 RA Carrincci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
 RA Kono H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
 RT "Normalization and subtraction of cap-trapper-selected cDNAs to
 RT prepare full-length cDNA libraries for rapid discovery of new genes."
 RL Genome Res. 10:1617-1630(2000).
 [5]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
 RX MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
 RA Shibata K., Itoh M., Azawa K., Nagaoaka S., Sasaki N., Carrincci P.,
 RA Kono H., Akiyama J., Nishi K., Kitahara T., Tashiro H., Itoh M.,
 RA Suni N., Ishii Y., Nakamura S., Hazama M., Nishino T., Harada A.,
 RA Yamamoto R., Matsuno H., Sakaguchi S., Ikegami T., Kaishiki K.,
 RA Fujiwara S., Inoue K., Togawa Y., Izawa M., Ohara E., Wataniki K.,
 RA Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsura S., Kawai J.,
 RA Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
 RT "RIKEN integrated sequence analysis (RISA) system-384-format

RT sequencing pipeline with 384 multicapillary sequencer.";
 RL Genome Res. 10:1757-1771 (2000).
 RN [6]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
 RA Adachi J., Aizawa K., Akimura T., Arikawa T., Bono H., Carinici P.,
 RA Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
 RA Hayashida K., Hayatsu N., Hiramoto K., Hirooka T., Hirozane T.,
 RA Hori F., Imocani K., Ichii Y., Itoh M., Kagawa T., Kasukawa T.,
 RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
 RA Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
 RA Niishi K., Nomura K., Numazaki R., Ohno M., Ohnato N., Okazaki Y.,
 RA Saito K., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
 RA Tagawa A., Takahashi F., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
 RA Tomaru A., Taya T., Yasunishi A., Muramatsu M., Hayashizaki Y.,
 RL Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.
 CC 1-1 SMILARITY: Belongs to peptidase family A1.
 DR EMBL; AK082317; BAC38462.1; -
 DR HSSP; P56817; 1PKN.
 DR MGD; MGI:1346542; Bace1.
 DR GO; GO:0005768; C:endosome; ISS.
 DR GO; GO:0005615; C:extracellular space; TAS.
 DR GO; GO:0005794; C:Golgi apparatus; ISS.
 DR GO; GO:0016021; C:integral to membrane; ISS.
 DR GO; GO:0004130; F:aspartic-type endopeptidase activity; ISS.
 DR GO; GO:0005035; P:beta-amyloid metabolism; ISS.
 DR GO; GO:0006509; P:membrane protein ectodomain proteolysis; ISS.
 DR InterPro; IPR001461; Peptidase A1.
 DR InterPro; IPR009119; Pept_A1_BACE.
 DR InterPro; IPR009120; Pept_A1_BACE.
 DR InterPro; IPR009007; Pept_Aspartic.
 DR InterPro; IPR001969; Pept_Asp_AS.
 DR PRINTS; PR01816; BACE1.
 DR PRINTS; PR01815; BACEFAMILY.
 DR PRINTS; PR00792; PEPsin.
 DR PROSITE; PS00141; ASP_PROTEASE; 1.
 DR Aspartyl protease; Hydrolase; Protease.
 KW SEQUENCE 467 AA; 52063 RM; 31AB674FP1843652 CRC64;
 SQ
 Query Match 74.0%; Score 77; DB 1; Length 467;
 Best Local Similarity 80.0%; Pred. No. 5.6;
 Matchee 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
 QY 22 TGHGRLPRLSGIGAPLGL 41
 Db 22 THLGIRLPRLSGLAGPVLGL 41
 RESULT 5
 BAE1 MOUSE STANDARD; PRT; 501 AA.
 AC P56818;
 DT 30-MAY-2000 (Rel. 39, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DT 25-OCT-2004 (Rel. 45, Last annotation update)
 DE Beta-secretase 1 precursor (BC 3.4.23.46) (Beta-site APP cleaving
 DE enzyme 1) (Beta-site amyloid precursor protein cleaving enzyme 1)
 DE (Aspartyl protease 2) (Asp 2) (ASP2) (Membrane-associated aspartic
 DE protease 2) (Memapsin-2).
 DN Name=Bace1; Synonyms=Bace;
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 ON NCBI_TaxId=10090;
 RX SEQUENCE FROM N.A.
 RX MEDLINE=20002972; PubMed=10531052; DOI=10.1126/science.286.5440.735;
 RA Vassar R., Bennett B.D., Babu-Khan S., Kahn S., Mendiaz B.A.,
 RA Denis P., Teplow D.B., Roses S., Amarante S., Loebner R., Luo Y.,
 RA Fisher S., Fuller J., Edwards S., Lille J., Jarosinski M.A.,
 RA Biere A.L., Curran E., Burgess T., Louis J.-C., Collins F.,
 RA Treanor J., Rogers G., Citron M.;

RT "Beta-secretase cleavage of Alzheimer's amyloid precursor protein by
 RT the transmembrane aspartic protease BACE.";
 RL Science 286:735-741(1999).
 RN [2]
 RP REVIEWS TO 6 AND 81-87.
 RA Bennett B.D., Vassar R., Citron M.;
 RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=20057170; PubMed=10591213; DOI=10.1038/990107;
 RA Yan R., Bien-Lyong M.J., Shuck M.E., Mao H., Toriy M.C., Pauley A.M.,
 RA Braheier J.R., Strachan N.C., Mathews W.R., Buhl A.E., Carter D.B.,
 RA Tomaseelli A.G., Parodi L.A., Heinrichson R.L., Gurney M.E.;
 RT "Membrane-anchored aspartyl protease with Alzheimer's disease beta-
 RT secretase activity.";
 RL Nature 402:533-537(1999).
 RN [4]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Heart;
 RX MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
 RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
 RA Nikaide I., Osato N., Saito R., Suzuki H., Yamana H., Kiyosawa H.,
 RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gotohori T.,
 RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
 RA Schirral L.M., Kanadin A., Matsuda H., Batalov S., Belsel K.W.,
 RA Blake U.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
 RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Foxer K.S.,
 RA Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,
 RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
 RA Kanai A., Kawai H., Kawasawa Y., Kedierski R.M., King B.L.,
 RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
 RA Maglot D.R., Malcais L., Marchionni L., McKenzie L., Miki H.,
 RA Nagashima T., Numata K., Okido T., Pavan W.J., Petrea G., Pesole G.,
 RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramchandran S.,
 RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
 RA Sandelin A., Schneider C., Sempke C.A., Secou M., Shimada K.,
 RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
 RA Verardo R., Wagner B., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
 RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
 RA Yuan Z., Zavalan M., Zhu Y., Zimmer A., Zimmet P., Hayatsu N.,
 RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
 RA Shiraki T., Waki K., Kawai J., Aizawa K., Arikawa T., Fukuda S.,
 RA Hara A., Hashizume W., Imocani K., Ichii Y., Itoh M., Kagawa I.,
 RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
 RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
 RA Birney E., Hayashizaki Y.;
 RT "Analysis of the mouse transcriptome based on functional annotation of
 RT 60,770 full-length cDNAs.";
 RL Nature 420:563-573(2002).
 RN [5]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6; TISSUE=Brain;
 RX MEDLINE=22386257; PubMed=12477932; DOI=10.1073/pnas.242603899;
 RA Straube R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Sherman C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,
 RA Diatchenko L., Maruina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,
 RA Brownstein M.J., Ueslin T.B., Toshiyuki S., Carinici P., Prange S.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Guarnare P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahy J.M., Heltan E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
 RA Blakeley R.W., Madan A., Young A.C., Shcherchenko Y., Bouffard G.G.,
 RA Blakesley A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butcherfield Y.S.N., Krzywinski M.I., Skalka U., Smalls D.E.,
 RA Schnerker A., Schein J.B., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

CC -1- FUNCTION: Responsible for the proteolytic processing of the
 CC amyloid precursor protein (APP). Cleaves at the amino terminus of
 CC the A-beta peptide sequence, between residues 671 and 672 of APP,
 CC leads to the generation and extracellular release of beta-cleaved
 CC soluble APP, and a corresponding cell-associated carboxy-terminal
 CC fragment which is later released by gamma-secretase (By
 CC similarity).

CC -1- CATALYTIC ACTIVITY: Broad endopeptidase specificity. Cleaves Glu-
 CC Val-Aen-Leu-|-Asp-Ala-Glu-Phe in the Swedish variant of
 CC Alzheimer's amyloid precursor protein.
 CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
 CC -1- TISSUE SPECIFICITY: Brain.
 CC -1- SIMILARITY: Belongs to the peptidase A1 family.

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CC -----
 CC EMBL: AF190726; AAF04143.2; -
 CC EMBL: AF200346; AAF17082.1; -
 CC EMBL: AK014464; BAB29370.1; -
 CC EMBL: BC048189; AHA48189.1; -
 CC HSSP: P56817; IM4H.
 CC MEROPS: A01.004; -.
 CC MGD: MGI:1346542; Bace1.
 CC InterPro: IPR009119; Pept_A1_BACE.
 CC InterPro: IPR009120; Pept_A1_BACE1.
 CC InterPro: IPR001969; Pept_Asp_AS.
 CC InterPro: IPR009007; Pept_AspArtic.
 CC InterPro: IPR001461; Peptidase_A1.
 CC Pfam: PF00026; Asp_1.
 CC PRINTS: PRO1816; BACE1.
 CC PRINTS: PRO1815; BACEFAMILY.
 CC PRINTS: PRO0792; PERSIN.
 CC PROSITE: PS00144; ASP_PROTEASE; 1.
 CC Aspartyl protease; Glycoprotein; Hydrolyase; Signal; Transmembrane;
 CC Zymogen.

CC -----
 CC FT SIGNAL 1 21 Potential.
 CC FT PROPEP 22 45 Potential.
 CC FT CHAIN 46 501 Beta-secretase 1.
 CC FT DOMAIN 22 457 Extracellular (Potential).
 CC FT TRANSMEM 458 478 Potential.
 CC FT DOMAIN 479 501 Cytoplasmic (Potential).
 CC FT ACT_SITE 93 93 By similarity.
 CC FT ACT_SITE 289 289 By similarity.
 CC FT DISULFID 216 420 By similarity.
 CC FT DISULFID 278 443 By similarity.
 CC FT DISULFID 330 380 By similarity.
 CC FT CARBOHYD 153 153 N-linked (GlcNAc . . .) (Potential).
 CC FT CARBOHYD 172 172 N-linked (GlcNAc . . .) (Potential).
 CC FT CARBOHYD 223 223 N-linked (GlcNAc . . .) (Potential).
 CC FT CARBOHYD 354 354 N-linked (GlcNAc . . .) (Potential).
 CC SEQUENCE 501 AA; 55747 MW; C085A0131458474E CRC64;

Query March 74.0%; Score 77; DB 1; Length 501;
 Best Local Similarity 80.0%; Pred. No. 5.6;
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TONGIRLPNSGLGAPLGL 41
 DB 22 THLGIRLPNSGLGAPLGL 41

RESULT 6
 ID_BAI_RAT STANDARD; PRT; 501 AA.
 AC P56819;
 DT 30-MAY-2000 (Rel. 39, Created)
 DT 30-MAY-2000 (Rel. 39, Last sequence update)

DT 25-OCT-2004 (Rel. 45, Last annotation update)
 DE Beta-secretase 1 precursor (BC 3.4.23.46) (Beta-site APP cleaving
 DE enzyme 1) (Beta-site amyloid precursor protein cleaving enzyme 1)
 DE (Aspartyl protease 2) (Asp 2) (ASP2) (Membrane-associated aspartic
 DE protease 2) (Memapsin-2).
 GN Name=Bace1; Synonyms=Bace;
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 CC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 CC NCBI_Taxid=10116;
 CC [1]
 CC SEQUENCE FROM N.A.
 CC MEDLINE=20002972; PubMed=10531052; DOI=10.1126/science.286.5440.735;
 CC Vassar R., Bennett B.D., Babu-Khan S., Kahn S., Mendiaz E.A., Luo Y.,
 CC Denis P., Teplow D.B., Rose S., Amaratne P., Loeloff R., Luo Y.,
 CC Fisher S., Fuller J., Edenson S., Lile J., Jarosinski M.A.,
 CC Biere A.L., Curran E., Burgess T., Louis J.-C., Collins F.,
 CC Treanor J., Rogers G., Citron M.,
 CC "Beta-secretase cleavage of Alzheimer's amyloid precursor protein by
 CC the transmembrane aspartic protease BACE.";
 CC Science 286:735-741(1999).
 CC -1- FUNCTION: Responsible for the proteolytic processing of the
 CC amyloid precursor protein (APP). Cleaves at the amino terminus of
 CC the A-beta peptide sequence, between residues 671 and 672 of APP,
 CC leads to the generation and extracellular release of beta-cleaved
 CC soluble APP, and a corresponding cell-associated carboxy-terminal
 CC fragment which is later released by gamma-secretase (By
 CC similarity).

CC -1- CATALYTIC ACTIVITY: Broad endopeptidase specificity. Cleaves Glu-
 CC Val-Aen-Leu-|-Asp-Ala-Glu-Phe in the Swedish variant of
 CC Alzheimer's amyloid precursor protein.
 CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
 CC -1- SIMILARITY: Belongs to the peptidase A1 family.

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 CC or send an email to license@isb-sib.ch).

CC -----
 CC EMBL: AF190727; AAF04144.1; -
 CC HSSP: P56817; IM4H.
 CC MEROPS: A01.004; -.
 CC RGD: 2191; Bace.
 CC InterPro: IPR009119; Pept_A1_BACE.
 CC InterPro: IPR009120; Pept_A1_BACE1.
 CC InterPro: IPR001969; Pept_Asp_AS.
 CC InterPro: IPR009007; Pept_AspArtic.
 CC InterPro: IPR001461; Peptidase_A1.
 CC Pfam: PF00026; Asp_1.
 CC PRINTS: PRO1816; BACE1.
 CC PRINTS: PRO1815; BACEFAMILY.
 CC PRINTS: PRO0792; PERSIN.
 CC PROSITE: PS00144; ASP_PROTEASE; 1.
 CC Aspartyl protease; Glycoprotein; Hydrolyase; Signal; Transmembrane;
 CC Zymogen.

CC -----
 CC FT SIGNAL 1 21 Potential.
 CC FT PROPEP 22 45 Potential.
 CC FT CHAIN 46 501 Beta-secretase 1.
 CC FT DOMAIN 22 457 Extracellular (Potential).
 CC FT TRANSMEM 458 478 Potential.
 CC FT DOMAIN 479 501 Cytoplasmic (Potential).
 CC FT ACT_SITE 93 93 By similarity.
 CC FT ACT_SITE 289 289 By similarity.
 CC FT DISULFID 216 420 By similarity.
 CC FT DISULFID 278 443 By similarity.
 CC FT DISULFID 330 380 By similarity.
 CC FT CARBOHYD 153 153 N-linked (GlcNAc . . .) (Potential).
 CC FT CARBOHYD 172 172 N-linked (GlcNAc . . .) (Potential).
 CC FT CARBOHYD 223 223 N-linked (GlcNAc . . .) (Potential).
 CC FT CARBOHYD 354 354 N-linked (GlcNAc . . .) (Potential).

SQ SEQUENCE 501 AA; 55806 MW; 24B445BC8B87DE3 CRC64;
 Query Match 74.0%; Score 77; DB 1; Length 501;
 Best Local Similarity 80.0%; Pred. No. 5.6;
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLAGAPLGL 41
 Db 22 THLGIRLPLRSGLAGAPLGL 41

RESULT 7
 Q8BOY4 PRELIMINARY; PRT; 501 AA.
 ID Q8BOY4
 AC Q8BOY4;
 DT 01-MAR-2003 (TREMBLrel. 23, Created)
 DT 01-MAR-2003 (TREMBLrel. 23, Last sequence update)
 DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
 DE Mus musculus adult male corpora quadrigemina cDNA, RIKEN full-length
 DE enriched library, clone:B230346M13 product:beta-site APP cleaving
 DE enzyme, full insert sequence.
 GN Name=Bace1; Synonym=Bace;
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
 RX MEDLINE=20493374; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
 RA MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
 RA Carninci P., Hayashizaki Y.;
 RT "High-efficiency full-length cDNA cloning."
 RL Mech. Enzymol. 303:19-44 (1999).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
 RX MEDLINE=20493374; PubMed=11217851; DOI=10.1038/35055500;
 RA RIKEN PANTOM Consortium;
 RT "Functional annotation of a full-length mouse cDNA collection."
 RL Nature 409:685-690 (2001).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
 RA The PANTOM Consortium,
 RA the RIKEN Genome Exploration Research Group Phase I & II Team;
 RT "Analysis of the mouse transcriptome based on functional annotation of
 RT 60,770 full-length cDNAs."
 RL Nature 420:563-573 (2002).
 RN [4]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
 RX MEDLINE=20493374; PubMed=11042159; DOI=10.1101/gr.145100;
 RA Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
 RA Kono H., Okazaki Y., Muratsu M., Hayashizaki Y.;
 RT "Normalization and subtractions of cap-trapper-selected cDNAs to
 RT prepare full-length cDNA libraries for rapid discovery of new genes."
 RL Genome Res. 10:1617-1630 (2000).
 RN [5]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
 RX MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
 RA Shibata K., Itoh M., Aizawa K., Katsuna S., Sasaki N., Carninci P.,
 RA Kono H., Akiyama Y., Nishi K., Katsuna T., Teshiro H., Itoh M.,
 RA Suni N., Ishii Y., Nakamura S., Hazama M., Nishino T., Harada A.,
 RA Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
 RA Fujiwara S., Inoue K., Togawa Y., Izawa M., Ohara E., Watanabe K.,
 RA Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsura S., Kawai J.,
 RA Okazaki Y., Muratsu M., Inoue Y., Kira A., Hayashizaki Y.;
 RT "RIKEN integrated sequence analysis (RISA) system-384-format
 RT sequencing pipeline with 384 multicapillary sequencer."
 RL Genome Res. 10:1757-1771 (2000).
 RN [6]
 RP SEQUENCE FROM N.A.

RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;
 RA Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
 RA Fukuda S., Furuno M., Hamagaki T., Hara A., Hashizume W.,
 RA Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
 RA Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
 RA Kato H., Kawai J., Kojima Y., Kondo S., Kono H., Kouda M., Koya S.,
 RA Kuribara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
 RA Nishi K., Nomura K., Numazaki R., Ohno M., Ohnaka N., Okazaki Y.,
 RA Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
 RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
 RA Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
 RA Tomaru A., Toya T., Yasunishi A., Muratsu M., Hayashizaki Y.;
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
 CC -1- SIMILARITY: Belongs to peptidase family A1.
 DR EMBL, AK046175; BAC32620.1; -.
 DR HSSP, P56817; 1PKN.
 DR MGD, MGI:1346542; Bace1.
 DR GO; GO:0005768; C:endosome; ISS.
 DR GO; GO:0005615; C:extracellular space; TAS.
 DR GO; GO:0005794; C:Golgi apparatus; ISS.
 DR GO; GO:0016021; C:integral to membrane; ISS.
 DR GO; GO:0004190; F:aspartic-type endopeptidase activity; ISS.
 DR GO; GO:0050435; F:beta-amyloid metabolism; ISS.
 DR GO; GO:0006509; P:membrane protein ectodomain proteolysis; ISS.
 DR InterPro; IPR001461; Peptidase A1.
 DR InterPro; IPR009119; Pept_A1_BACE.
 DR InterPro; IPR009120; Pept_A1_BACE1.
 DR InterPro; IPR009007; Pept_AspArtic.
 DR PRINTS; PRO1816; BACE1.
 DR PRINTS; PRO1815; BACEFAMILY.
 DR PRINTS; PRO0792; PEPsin.
 DR PROSITE; PS00141; ASP_PROTEASE; 1.
 KW aspartyl protease, hydrolase, protease.
 SQ SEQUENCE 501 AA; 55816 MW; C085513145E024E CRC64;

Query Match 74.0%; Score 77; DB 1; Length 501;
 Best Local Similarity 80.0%; Pred. No. 5.6;
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLAGAPLGL 41
 Db 22 THLGIRLPLRSGLAGAPLGL 41

RESULT 8
 Q9ULS1 PRELIMINARY; PRT; 532 AA.
 ID Q9ULS1
 AC Q9ULS1;
 DT 01-MAY-2000 (TREMBLrel. 13, Created)
 DT 01-OCT-2001 (TREMBLrel. 18, Last sequence update)
 DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
 DE KIAA1149 protein (Fragment).
 GN Name=KIAA1149;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=20039618; PubMed=10574461;
 RA Hirosewa M., Nagase T., Ishikawa K., Kikuno R., Nomura N., Ohara O.;
 RT "Characterization of cDNA clones selected by the GenMark analysis
 RT from size-fractionated cDNA libraries from human brain."
 RL DNA Res. 6:329-336 (1999).
 CC -1- SIMILARITY: Belongs to peptidase family A1.
 DR EMBL; AB032975; BAA6463.2; -.
 DR HSSP; P56817; 1PKN.
 DR GO; GO:0005768; C:endosome; ISS.
 DR GO; GO:0005794; C:Golgi apparatus; ISS.
 DR GO; GO:0016021; C:integral to membrane; ISS.
 DR GO; GO:0004190; F:aspartic-type endopeptidase activity; ISS.

DR GO: GO:0050435; P:beta-amyloid metabolism; ISS.
DR GO: GO:0006509; P:membrane protein ectodomain proteolysis; ISS.
DR InterPro; IPR001461; Peptidase_A1.
DR InterPro; IPR009119; Pept_A1_BACE.
DR InterPro; IPR009120; Pept_A1_BACE1.
DR InterPro; IPR009007; Pept_Aspartic.
DR InterPro; IPR001969; Pept_Asp_AS.
DR PRINTS; PRO1816; BACE1.
DR PRINTS; PRO1815; BACEFAMILY.
DR PRINTS; PRO0792; PEPsin.
DR PROSITE; PS00141; ASP_PROTEASE; 1.
KW Aspartyl protease; Hydrolyase; Protease.
FT NON_TER 1
SQ SEQUENCE 532 AA; 58720 MW; 98B135D0D5FBD2E8 CRC64;

Query Match 39.4%; Score 41; DB 1; Length 532;
Best Local Similarity 61.5%; Pred. No. 7;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 29 PLRSGLGAGPIGL 41
| : |||||
Db 60 PCAAAWGAGPIGL 72

Search completed: August 3, 2005, 11:51:13
Job time : 0.001 secs

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OM protein - protein search, using sw model

Run on: August 3, 2005, 11:50:41 ; Search time 0.001 Seconds
(without alignments)
10.020 Million cell updates/sec

Title: us-10-726-967a-1

Perfect score: 104
Sequence: 1 TQHGIRLPKRSGLGAPLGL 20

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1 seqs, 501 residues

Total number of hits satisfying chosen parameters: 1

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 500 summaries

Database : rprdb:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	104	100.0	501	1 A59090	

ALIGNMENTS

RESULT 1
A59090

aspartic proteinase (BC 3.4.23.-) BACE precursor - human
N/Alternate names: beta-secretase; beta-site APP cleaving enzyme
C/Species: Homo sapiens (man)
C/Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C/Accession: A59090
R/Vassar, R.; Bennett, B.D.; Babu-Khan, S.; Kahn, S.; Mendiaz, B.A.; Denis, P.; Teplow, M.A.; Biere, A.L.; Curran, E.; Burgess, T.; Louis, J.C.; Collins, F.; Treanor, J.; Roger Science 286, 735-741, 1999
A/Title: beta-Secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane
A/Reference number: A59090; MUID:20002972; PMID:10531052
A/Note: submitted to Genbank, September 1999
A/Accession: A59090
A/Status: not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 1-501 <VAS>
A/Cross-references: UNIPROT:P56817; GB:AF190725; NID:G6118538; PIDN:AAF04142.1; PID:G611
C/Genetics:
A/Gene: BACE
C/Superfamily: beta-secretase
C/Keywords: Alzheimer's disease; aspartic proteinase; brain; glycoprotein; hydrolase; pr
F/1-21/Domain: signal sequence #status predicted <SIG>
F/22-45/Domain: propeptide #status predicted <PRO>
F/46-501/Product: acid proteinase BACS #status predicted <MAT>
F/461-477/Domain: transmembrane #status predicted <TRN>

F/93,289/Active site: Asp #status predicted
F/153,172,223,354/Binding site: carboxylate (Asn) (covalent) #status predicted
F/330-380/Disulfide bonds: #status predicted

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPKRSGLGAPLGL 41
Db 22 TQHGIRLPKRSGLGAPLGL 41

Search completed: August 3, 2005, 11:50:41
Job time : 0.001 secs

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This Page Blank (uspto)

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: August 3, 2005, 11:49:30 ; Search time 1 Seconds

(without alignments)
1.716 Million cell updates/sec

Title: ue-10-726-967a-1

Perfect score: 104

Sequence: 1 TQHGIRPLRSLGGLGAPLGL 20

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 189 seqs, 85797 residues

Total number of hits satisfying chosen parameters: 189

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 500 summaries

Database : raidb:*

SUMMARIES

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed,

and is derived by analysis of the total score distribution.

Result No.	Score	Query Match Length	ID	Description
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2	104	100.0	219 1 US-09-471-669A-57	Sequence 57, Appl
3	104	100.0	420 1 US-09-724-566A-60	Sequence 60, Appl
4	104	100.0	420 1 US-09-471-669A-60	Sequence 60, Appl
5	104	100.0	428 1 US-09-548-372D-51	Sequence 51, Appl
6	104	100.0	428 1 US-09-548-372D-51	Sequence 51, Appl
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16	104	100.0	428 1 US-09-794-925A-51	Sequence 51, Appl
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APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
CURRENT APPLICATION NUMBER: US/09/471,669A
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: US 60/114,408
PRIOR FILING DATE: 1998-12-31
PRIOR APPLICATION NUMBER: US 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 57
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-09-471-669A-57

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Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPVGL 41
DB 22 TONGIRLPLRSGLGAPVGL 41

RESULT 3
US-09-724-566A-60
Sequence 60, Application US/09724566A
Patent No. 6627739
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Baeti, Gurigbal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6627739mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
FILE REFERENCE: 228-US-NEWC2
CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 60
LENGTH: 420
TYPE: PRT
ORGANISM: Homo sapiens
US-09-724-566A-60

Query Match 100.0%; Score 104; DB 1; Length 420;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPVGL 41
DB 22 TONGIRLPLRSGLGAPVGL 41

RESULT 4
US-09-471-669A-60
Sequence 60, Application US/09471669A
Patent No. 6830918
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Baeti, Gurigbal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6830918mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
CURRENT APPLICATION NUMBER: US/09/471,669A
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: US 60/114,408
PRIOR FILING DATE: 1998-12-31
PRIOR APPLICATION NUMBER: US 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 60
LENGTH: 420
TYPE: PRT
ORGANISM: Homo sapiens
US-09-471-669A-60

Query Match 100.0%; Score 104; DB 1; Length 420;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 22 TONGIRLPLRSGLGAPVGL 41

RESULT 5
US-09-548-372D-51
Sequence 51, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 51
LENGTH: 428
TYPE: PRT
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US-09-548-372D-51

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RESULT 6
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; Sequence 51, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-367D-51

Query Match      100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 7
US-09-551-853D-51
; Sequence 51, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial sequence

; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-551-853D-51

Query Match      100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 8
US-09-416-901B-51
; Sequence 51, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; CURRENT FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-416-901B-51

Query Match      100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 9
US-09-548-376D-51
; Sequence 51, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
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SEQ ID NO 51
LENGTH: 428
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-548-376D-51

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGGAPLGL 41
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 10
US-09-794-927A-51
Sequence 51, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280PG
CURRENT APPLICATION NUMBER: US/09/794,927A
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 51
LENGTH: 428
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-794-927A-51

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGGAPLGL 41
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 11
US-09-548-373D-51
Sequence 51, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280B
CURRENT APPLICATION NUMBER: US/09/548,373D
PRIOR FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 51
LENGTH: 428
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-548-373D-51

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGGAPLGL 41
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 12
US-09-795-847B-51
Sequence 51, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847B
PRIOR FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 51
LENGTH: 428
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-795-847B-51

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGGAPLGL 41
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 13
US-09-869-414-51
Sequence 51, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

```

; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-869-414-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPURSGGAPLGL 41
Db      22 TQHGIRLPURSGGAPLGL 41
```

```

RESULT 14
US-09-548-366F-51
; Sequence 51, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-548-366F-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPURSGGAPLGL 41
Db      22 TQHGIRLPURSGGAPLGL 41
```

RESULT 15

```

US-09-548-368D-51
; Sequence 51, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-548-368D-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPURSGGAPLGL 41
Db      22 TQHGIRLPURSGGAPLGL 41
```

```

RESULT 16
US-09-794-925A-51
; Sequence 51, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280HT
; CURRENT APPLICATION NUMBER: US/09/794,925A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-794-925A-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPURSGGAPLGL 41
```


Db 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 17
US-09-724-566A-74

; Sequence 74, Application US/09724566A

; Patent No. 6627739

; GENERAL INFORMATION:

; APPLICANT: Anderson, John P.

; APPLICANT: Baal, Gurigbal

; APPLICANT: Doane, Minh Tam

; APPLICANT: Frigon, No. 6627739mand

; APPLICANT: John, Varghese

; APPLICANT: Power, Michael

; APPLICANT: Sinha, Sukanto

; APPLICANT: Tatsuno, Gwen

; APPLICANT: Tung, Jay

; APPLICANT: Wang, Shuwen

; APPLICANT: McConlogue, Lisa

; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and

; TITLE OF INVENTION: Methods

; FILE REFERENCE: 228-US-NEWC2

; CURRENT APPLICATION NUMBER: US/09/724,566A

; CURRENT FILING DATE: 2000-11-28

; PRIOR APPLICATION NUMBER: US 09/501,708

; PRIOR FILING DATE: 2000-02-10

; PRIOR APPLICATION NUMBER: 60/119,571

; PRIOR FILING DATE: 1999-02-10

; PRIOR APPLICATION NUMBER: 60/139,172

; PRIOR FILING DATE: 1999-06-15

; NUMBER OF SEQ ID NOS: 104

; SOFTWARE: FastSeq for Windows Version 4.0

; SEQ ID NO 74

; LENGTH: 431

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-724-566A-74

Query Match 100.0%; Score 104; DB 1; Length 431;

Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPRLRSGLGAPLGL 41

Db 1 T0HGIRLPRLRSGLGAPLGL 20

RESULT 18
US-09-471-669A-74

; Sequence 74, Application US/09471669A

; Patent No. 6630918

; GENERAL INFORMATION:

; APPLICANT: Anderson, John P.

; APPLICANT: Baal, Gurigbal

; APPLICANT: Doane, Minh Tam

; APPLICANT: Frigon, No. 6630918mand

; APPLICANT: John, Varghese

; APPLICANT: Power, Michael

; APPLICANT: Sinha, Sukanto

; APPLICANT: Tatsuno, Gwen

; APPLICANT: Tung, Jay

; APPLICANT: Wang, Shuwen

; APPLICANT: McConlogue, Lisa

; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS

; FILE REFERENCE: 015270-006430US

; CURRENT APPLICATION NUMBER: US/09/471,669A

; CURRENT FILING DATE: 1999-12-24

; PRIOR APPLICATION NUMBER: US 60/114,408

; PRIOR FILING DATE: 1998-12-31

; PRIOR APPLICATION NUMBER: US 60/119,571

; PRIOR FILING DATE: 1999-02-10

; PRIOR APPLICATION NUMBER: US 60/139,172

; PRIOR FILING DATE: 1999-06-15

; NUMBER OF SEQ ID NOS: 108

; SOFTWARE: Patent In Ver. 2.1

; SEQ ID NO 74

; LENGTH: 431

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-471-669A-74

Query Match 100.0%; Score 104; DB 1; Length 431;

Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPRLRSGLGAPLGL 41

Db 1 T0HGIRLPRLRSGLGAPLGL 20

RESULT 19
US-09-548-372D-26

; Sequence 26, Application US/09548372D

; Patent No. 6420534

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/62801

; CURRENT APPLICATION NUMBER: US/09/548,372D

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: Patent In version 3.1

; SEQ ID NO 26

; LENGTH: 433

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-548-372D-26

Query Match 100.0%; Score 104; DB 1; Length 433;

Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPRLRSGLGAPLGL 41

Db 2 T0HGIRLPRLRSGLGAPLGL 21

RESULT 20
US-09-548-367D-26

; Sequence 26, Application US/09548367D

; Patent No. 6440698

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/62801

; CURRENT APPLICATION NUMBER: US/09/548,367D

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 26
;; LENGTH: 433
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-548-367D-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 21
US-09-551-853D-26
; Sequence 26, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 22
US-09-416-901B-26
; Sequence 26, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24

;; NUMBER OF SEQ ID NOS: 72
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 26
;; LENGTH: 433
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-416-901B-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 23
US-09-548-376D-26
; Sequence 26, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-376D-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 24
US-09-794-927A-26
; Sequence 26, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 26
LENGTH: 433
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-927A-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPRLRSGLGAPLGL 41
Db 2 T0HGIRLPRLRSGLGAPLGL 21

RESULT 25
US-09-548-373D-26
Sequence 26, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62808
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 26
LENGTH: 433
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-373D-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPRLRSGLGAPLGL 41
Db 2 T0HGIRLPRLRSGLGAPLGL 21

RESULT 26
US-09-795-847B-26
Sequence 26, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert U.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/62808
CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 26
LENGTH: 433
TYPE: PRT
ORGANISM: Homo sapiens
US-09-795-847B-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPRLRSGLGAPLGL 41
Db 2 T0HGIRLPRLRSGLGAPLGL 21

RESULT 27
US-09-869-414-26
Sequence 26, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Beinowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/62808
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 26
LENGTH: 433
TYPE: PRT
ORGANISM: Homo sapiens
US-09-869-414-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPRLRSGLGAPLGL 41
Db 2 T0HGIRLPRLRSGLGAPLGL 21

RESULT 28
US-09-548-366F-26
Sequence 26, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62807
CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12

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; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPLRSGIGGAPLGL 41
Db      2 TQHGIRLPLRSGIGGAPLGL 21
```

```

RESULT 29
US-09-548-368D-26
; Sequence 26, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPLRSGIGGAPLGL 41
Db      2 TQHGIRLPLRSGIGGAPLGL 21
```

```

RESULT 30
US-09-794-925A-26
; Sequence 26, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
```

```

; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPLRSGIGGAPLGL 41
Db      2 TQHGIRLPLRSGIGGAPLGL 21
```

```

RESULT 31
US-09-806-194A-26
; Sequence 26, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPLRSGIGGAPLGL 41
Db      2 TQHGIRLPLRSGIGGAPLGL 21
```

```

RESULT 32
US-09-548-372D-53
; Sequence 53, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280I
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
```

;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-548-372D-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGGAPLGL 41
Db 22 TQHGIRLPRLSGGAPLGL 41

RESULT 33
US-09-548-367D-53

;; Sequence 53, Application US/09548367D
;; Patent No. 6440698
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; FILE REFERENCE: 29915/6280H
;; CURRENT APPLICATION NUMBER: US/09/548,367D
;; FILE REFERENCE: 29915/6280A
;; PRIOR FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-548-367D-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGGAPLGL 41
Db 22 TQHGIRLPRLSGGAPLGL 41

RESULT 34
US-09-551-853D-53

;; Sequence 53, Application US/09551853D
;; Patent No. 6500667
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; FILE REFERENCE: 29915/6280L
;; CURRENT APPLICATION NUMBER: US/09/551,853D

;; CURRENT FILING DATE: 2000-04-18
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-551-853D-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGGAPLGL 41
Db 22 TQHGIRLPRLSGGAPLGL 41

RESULT 35
US-09-416-901B-53

;; Sequence 53, Application US/09416901B
;; Patent No. 669671
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; FILE REFERENCE: 29915/6280A
;; CURRENT APPLICATION NUMBER: US/09/416,901B
;; CURRENT FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 72
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-416-901B-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGGAPLGL 41
Db 22 TQHGIRLPRLSGGAPLGL 41

RESULT 36
US-09-548-376D-53

;; Sequence 53, Application US/09548376D
;; Patent No. 6706485
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR

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/ TITLE OF INVENTION: AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 29915/6280F
/ CURRENT APPLICATION NUMBER: US/09/548,376D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin version 3.1
/ SEQ ID NO 53
/ LENGTH: 434
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-376D-53
```

```
Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY 22 TOHGIRLPLRSGGAPLGL 41
DB 22 TOHGIRLPLRSGGAPLGL 41
```

```
RESULT 37
US-09-794-927A-53
/ Sequence 53, Application US/09794927A
/ Patent No. 6727074
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280FG
/ CURRENT APPLICATION NUMBER: US/09/794,927A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 53
/ LENGTH: 434
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-794-927A-53
```

```
Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TOHGIRLPLRSGGAPLGL 41
DB 22 TOHGIRLPLRSGGAPLGL 41
```

RESULT 38

```
US-09-548-373D-53
/ Sequence 53, Application US/09548373D
/ Patent No. 6737510
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280B
/ CURRENT APPLICATION NUMBER: US/09/548,373D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin version 3.1
/ SEQ ID NO 53
/ LENGTH: 434
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-373D-53
```

```
Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TOHGIRLPLRSGGAPLGL 41
DB 22 TOHGIRLPLRSGGAPLGL 41
```

```
RESULT 39
US-09-795-847B-53
/ Sequence 53, Application US/09795847B
/ Patent No. 6753163
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280DE
/ CURRENT APPLICATION NUMBER: US/09/795,847B
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 53
/ LENGTH: 434
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-795-847B-53
```

```
Query Match 100.0%; Score 104; DB 1; Length 434;
```

Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 40

US-09-869-414-53
; Sequence 53, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beikowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
; OTHER INFORMATION: delta TM
US-09-869-414-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 41

US-09-548-366F-53
; Sequence 53, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT FILING DATE: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT

ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-548-366F-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 42

US-09-548-368D-53
; Sequence 53, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT FILING DATE: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-548-368D-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 43

US-09-794-925A-53
; Sequence 53, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT FILING DATE: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 53
LENGTH: 434
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-794-925A-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 44
US-09-548-372D-22
Sequence 22, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-372D-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 45
US-09-548-367D-22
Sequence 22, Application US/09548367D
Patent No. 6440698
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,367D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-367D-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 46
US-09-551-853D-22
Sequence 22, Application US/09551853D
Patent No. 6500667
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/551,853D
CURRENT FILING DATE: 2000-04-18
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-551-853D-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 47
US-09-416-901B-22
Sequence 22, Application US/09416901B
Patent No. 669671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594

NUMBER OF SEQ ID NOS: 72
SOFTWARE: Patentin version 3.1
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-416-901B-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGUGAPLGL 41
DB 15 TONGIRLPLRSGUGAPLGL 34

RESULT 48

US-09-548-376D-22
Sequence 22, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
TITLE OF INVENTION: AND USES
FILE REFERENCE: 28915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-376D-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGUGAPLGL 41
DB 15 TONGIRLPLRSGUGAPLGL 34

RESULT 49

US-09-794-927A-22
Sequence 22, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 28915/6280F
CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-927A-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGUGAPLGL 41
DB 15 TONGIRLPLRSGUGAPLGL 34

RESULT 50

US-09-548-373D-22
Sequence 22, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 28915/6280B
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-373D-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGUGAPLGL 41
DB 15 TONGIRLPLRSGUGAPLGL 34

RESULT 51

US-09-795-847B-22
Sequence 22, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinikson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493

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/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 22
/ LENGTH: 446
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-795-847B-22
```

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Query Match          100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      15 TQHGIRLPRLRSGLGAPLGL 34
```

```
RESULT 52
US-09-869-414-22
/ Sequence 22, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Beikowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1998-09-24
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 22
/ LENGTH: 446
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-869-414-22
```

```
Query Match          100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      15 TQHGIRLPRLRSGLGAPLGL 34
```

```
RESULT 53
US-09-548-366F-22
/ Sequence 22, Application US/09548366F
/ Patent No. 6797487
/ GENERAL INFORMATION:
/ APPLICANT: GUNNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280U
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ CURRENT FILING DATE: 2000-04-12
```

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/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln version 3.1
/ SEQ ID NO 22
/ LENGTH: 446
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-366F-22
```

```
Query Match          100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      15 TQHGIRLPRLRSGLGAPLGL 34
```

```
RESULT 54
US-09-548-368D-22
/ Sequence 22, Application US/09548368D
/ Patent No. 6825023
/ GENERAL INFORMATION:
/ APPLICANT: GUNNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280C
/ CURRENT APPLICATION NUMBER: US/09/548,368D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln version 3.1
/ SEQ ID NO 22
/ LENGTH: 446
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-368D-22
```

```
Query Match          100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      15 TQHGIRLPRLRSGLGAPLGL 34
```

```
RESULT 55
US-09-794-925A-22
/ Sequence 22, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gunney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, App Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
```

; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23/404,133
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 56
US-09-806-194A-22
; Sequence 22, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 57
US-09-724-566A-59
; Sequence 59, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guribhal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tateano, Gwen

; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; CURRENT FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 59
; LENGTH: 452
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-59

Query Match 100.0%; Score 104; DB 1; Length 452;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 58
US-09-471-669A-59
; Sequence 59, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guribhal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tateano, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Elan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; CURRENT FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 59
; LENGTH: 452
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669A-59

Query Match 100.0%; Score 104; DB 1; Length 452;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 59
US-09-548-372D-30
; Sequence 30, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-372D-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 60
US-09-548-367D-30
; Sequence 30, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62808
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-367D-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 61
US-09-551-853D-30
; Sequence 30, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 62
US-09-416-901B-30
; Sequence 30, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 63
US-09-548-376D-30
; Sequence 30, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; TITLE OF INVENTION: AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-376D-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPFRSGTGGAPLGL 41
Db 22 T0HGIRLPFRSGTGGAPLGL 41

RESULT 64
US-09-794-927A-30
; Sequence 30, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927A-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPFRSGTGGAPLGL 41
Db 22 T0HGIRLPFRSGTGGAPLGL 41

RESULT 65
US-09-548-373D-30
; Sequence 30, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-373D-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPFRSGTGGAPLGL 41
Db 22 T0HGIRLPFRSGTGGAPLGL 41

RESULT 66
US-09-795-847B-30
; Sequence 30, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847B-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 67

US-09-869-414-30
; Sequence 30, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beinkowsky et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/62804
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-30

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 453;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 68

US-09-548-366F-30
; Sequence 30, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 69

US-09-548-368D-30
; Sequence 30, Application US/09548368D
; Patent No. 6825823
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-30

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 453;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 70

US-09-794-925A-30
; Sequence 30, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280HT
; CURRENT APPLICATION NUMBER: US/09/794,925A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 71
US-09-806-194A-30
; Sequence 30, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; PRIOR FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 72
US-09-548-372D-24
; Sequence 24, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: Gurney ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-372D-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41
Db 28 T0HGIRLPLRSGLGAPLGL 47

RESULT 73
US-09-548-367D-32
; Sequence 32, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: Gurney ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-372D-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 74
US-09-548-367D-24
; Sequence 24, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: Gurney ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-367D-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 28 T0HGIRLPLRSGLGAPLGL 47

RESULT 75
US-09-548-367D-32
; Sequence 32, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-367D-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 76
US-09-551-853D-24
; Sequence 24, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41

Db 28 T0HGIRLPLRSGLGAPLGL 47

RESULT 77
US-09-551-853D-32
; Sequence 32, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 78
US-09-416-901B-24
; Sequence 24, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||

Db 28 T0HGIRLPLRSGLGAPLGL 47

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RESULT 79
US-09-416-901B-32
; Sequence 32, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; CURRENT FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-32
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Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

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RESULT 80
US-09-548-376D-24
; Sequence 24, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-376D-24
```

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

Db 28 T0HGIRLPLRSGLGAPLGL 47

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RESULT 81
US-09-548-376D-32
; Sequence 32, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-376D-32
```

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

```
RESULT 82
US-09-794-927A-24
; Sequence 24, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927A-24
```

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 28 TOHGIRLPRLRSGLGAPLGL 47

RESULT 83
US-09-794-927A-32
; Sequence 32, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927A-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 84
US-09-548-373D-24
; Sequence 24, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: Gurney ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-373D-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 28 TOHGIRLPRLRSGLGAPLGL 47

RESULT 85
US-09-548-373D-32
; Sequence 32, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: Gurney ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-373D-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 86
US-09-795-847B-24
; Sequence 24, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinriksen, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens

US-09-795-847B-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 28 TONGIRLPLRSGGAPLGL 47

RESULT 87

US-09-795-847B-32

; Sequence 32, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795, 847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847B-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 88

US-09-869-414-24

; Sequence 24, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 24

; LENGTH: 459

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-869-414-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 28 TONGIRLPLRSGGAPLGL 47

RESULT 89

US-09-869-414-32

; Sequence 32, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 90

US-09-548-366F-24

; Sequence 24, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23

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; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-24
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```

Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 T0HGIRLPRLRSGLGAPLGL 41
Db      28 T0HGIRLPRLRSGLGAPLGL 47
```

```

RESULT 91
US-09-548-366F-32
; Sequence 32, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-32
```

```

Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 T0HGIRLPRLRSGLGAPLGL 41
Db      22 T0HGIRLPRLRSGLGAPLGL 41
```

```

RESULT 92
US-09-548-368D-24
; Sequence 24, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
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```

; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-24
```

```

Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 T0HGIRLPRLRSGLGAPLGL 41
Db      28 T0HGIRLPRLRSGLGAPLGL 47
```

```

RESULT 93
US-09-548-368D-32
; Sequence 32, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-32
```

```

Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 T0HGIRLPRLRSGLGAPLGL 41
Db      22 T0HGIRLPRLRSGLGAPLGL 41
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RESULT 94
US-09-794-925A-24
; Sequence 24, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
```

PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 24
LENGTH: 459
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-925A-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLNSGLGAPLGL 41
Db 28 TQHGIRLPRLNSGLGAPLGL 47

RESULT 95
US-09-794-925A-32
Sequence 32, Application US/09794925A
Patent No. 6828117
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280H1
CURRENT APPLICATION NUMBER: US/09/794,925A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20861
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 32
LENGTH: 459
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-925A-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLNSGLGAPLGL 41
Db 22 TQHGIRLPRLNSGLGAPLGL 41

RESULT 96
US-09-806-194A-24
Sequence 24, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
NUMBER OF SEQ ID NOS: 74
SOFTWARE: Patentin version 3.1

PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 24
LENGTH: 459
TYPE: PRT
ORGANISM: Homo sapiens
US-09-806-194A-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLNSGLGAPLGL 41
Db 28 TQHGIRLPRLNSGLGAPLGL 47

RESULT 97
US-09-806-194A-32
Sequence 32, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 32
LENGTH: 459
TYPE: PRT
ORGANISM: Homo sapiens
US-09-806-194A-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLNSGLGAPLGL 41
Db 22 TQHGIRLPRLNSGLGAPLGL 41

RESULT 98
US-09-548-372D-6
Sequence 6, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280H1
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20861
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1

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; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-372D-6
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Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 99
US-09-548-367D-6
; Sequence 6, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT FILING DATE: 2000-04-12
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-367D-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 100
US-09-551-853D-6
; Sequence 6, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT FILING DATE: 2000-04-18
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
```

```
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 101
US-09-416-901B-6
; Sequence 6, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT FILING DATE: 2000-04-12
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 102
US-09-548-376D-6
; Sequence 6, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT FILING DATE: 2000-04-12
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
```

LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-376D-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 103
US-09-794-927A-6
Sequence 6, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280FG
CURRENT FILING DATE: 2001-02-27
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-927A-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 104
US-09-548-373D-6
Sequence 6, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280B
CURRENT FILING DATE: 2000-04-12
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1

SEQ ID NO 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-373D-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 105
US-09-795-847B-6
Sequence 6, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280DE
CURRENT FILING DATE: US/09/795, 847B
CURRENT FILING DATE: 2001-02-28
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-795-847B-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 106
US-09-869-414-6
Sequence 6, Application US/09869414
Patent No. 6796510
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT FILING DATE: US/09/869, 414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133

```

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-6
```

```

Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

Qy      22 T0HGIRLPNRSGLGAGAPLGL 41
Db      22 T0HGIRLPNRSGLGAGAPLGL 41
```

```

RESULT 107
US-09-548-366F-6
; Sequence 6, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-6
```

```

Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

Qy      22 T0HGIRLPNRSGLGAGAPLGL 41
Db      22 T0HGIRLPNRSGLGAGAPLGL 41
```

```

RESULT 108
US-09-548-368D-6
; Sequence 6, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
```

```

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-6
```

```

Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

Qy      22 T0HGIRLPNRSGLGAGAPLGL 41
Db      22 T0HGIRLPNRSGLGAGAPLGL 41
```

```

RESULT 109
US-09-794-925A-6
; Sequence 6, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-6
```

```

Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

Qy      22 T0HGIRLPNRSGLGAGAPLGL 41
Db      22 T0HGIRLPNRSGLGAGAPLGL 41
```

```

RESULT 110
US-09-806-194A-6
; Sequence 6, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark B.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177_P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
```


;; CURRENT FILING DATE: 2001-09-17
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 49
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 6
;; LENGTH: 476
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-806-194A-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPKRSGLGAPLGL 41
Db 22 TQHGIRLPKRSGLGAPLGL 41

RESULT 111
US-09-724-566A-66
;; Sequence 66, Application US/09724566A
;; Patent No. 6627739
;; GENERAL INFORMATION:
;; APPLICANT: Anderson, John P.
;; APPLICANT: Basi, Gurigbal
;; APPLICANT: Doane, Minh Tam
;; APPLICANT: Frigon, No. 6627739mand
;; APPLICANT: John, Varghese
;; APPLICANT: Power, Michael
;; APPLICANT: Sinha, Sukanto
;; APPLICANT: Tatsuno, Gwen
;; APPLICANT: Tung, Jay
;; APPLICANT: Wang, Shuwen
;; APPLICANT: McConlogue, Lisa
;; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
;; TITLE OF INVENTION: Methods
;; FILE REFERENCE: 228-US-NEWC2
;; CURRENT APPLICATION NUMBER: US/09/724,566A
;; CURRENT FILING DATE: 2000-11-28
;; PRIOR APPLICATION NUMBER: US 09/501,708
;; PRIOR FILING DATE: 2000-02-10
;; PRIOR APPLICATION NUMBER: 60/119,571
;; PRIOR FILING DATE: 1999-02-10
;; PRIOR APPLICATION NUMBER: 60/139,172
;; PRIOR FILING DATE: 1999-06-15
;; NUMBER OF SEQ ID NOS: 104
;; SOFTWARE: FastSeq for Windows Version 4.0
;; SEQ ID NO 66
;; LENGTH: 480
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-724-566A-66

Query Match 100.0%; Score 104; DB 1; Length 480;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPKRSGLGAPLGL 41
Db 1 TQHGIRLPKRSGLGAPLGL 20

RESULT 112
US-09-471-669A-66
;; Sequence 66, Application US/09471669A
;; Patent No. 6830918
;; GENERAL INFORMATION:
;; APPLICANT: Anderson, John P.
;; APPLICANT: Basi, Gurigbal
;; APPLICANT: Doane, Minh Tam
;; APPLICANT: Frigon, No. 6830918mand

;; APPLICANT: John, Varghese
;; APPLICANT: Power, Michael
;; APPLICANT: Sinha, Sukanto
;; APPLICANT: Tatsuno, Gwen
;; APPLICANT: Tung, Jay
;; APPLICANT: Wang, Shuwen
;; APPLICANT: McConlogue, Lisa
;; APPLICANT: Eilan Pharmaceuticals, Inc.
;; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
;; FILE REFERENCE: 015270-006430US
;; CURRENT APPLICATION NUMBER: US/09/471,669A
;; CURRENT FILING DATE: 1999-12-24
;; PRIOR APPLICATION NUMBER: US 60/114,408
;; PRIOR FILING DATE: 1998-12-31
;; PRIOR APPLICATION NUMBER: US 60/119,571
;; PRIOR FILING DATE: 1999-02-10
;; PRIOR APPLICATION NUMBER: US 60/139,172
;; PRIOR FILING DATE: 1999-06-15
;; NUMBER OF SEQ ID NOS: 108
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 66
;; LENGTH: 480
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-471-669A-66

Query Match 100.0%; Score 104; DB 1; Length 480;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPKRSGLGAPLGL 41
Db 1 TQHGIRLPKRSGLGAPLGL 20

RESULT 113
US-09-604-608-2
;; Sequence 2, Application US/09604608
;; Patent No. 6545127
;; GENERAL INFORMATION:
;; APPLICANT: Tang, Jordan J.N.
;; APPLICANT: Lin, Xinni
;; APPLICANT: Koelsch, Gerald
;; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
;; TITLE OF INVENTION: Of Use Thereof
;; FILE REFERENCE: OMRF 179
;; CURRENT APPLICATION NUMBER: US/09/604,608
;; CURRENT FILING DATE: 2000-06-27
;; PRIOR APPLICATION NUMBER: 60/141,363
;; PRIOR FILING DATE: 1999-06-28
;; PRIOR APPLICATION NUMBER: 60/168,060
;; PRIOR FILING DATE: 1999-11-30
;; PRIOR APPLICATION NUMBER: 60/177,836
;; PRIOR FILING DATE: 2000-01-25
;; PRIOR APPLICATION NUMBER: 60/178,368
;; PRIOR FILING DATE: 2000-01-27
;; PRIOR APPLICATION NUMBER: 60/210,292
;; PRIOR FILING DATE: 2000-06-08
;; NUMBER OF SEQ ID NOS: 31
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 2
;; LENGTH: 488
;; TYPE: PRT
;; ORGANISM: Homo sapiens

FEATURE:
;; OTHER INFORMATION: Purified Memapsin 2
;; OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide
;; OTHER INFORMATION: residues
;; OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,
;; OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and
;; OTHER INFORMATION: 376-377 are residues in contact with the OM99-2
;; OTHER INFORMATION: inhibitor
;; OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,

OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and
OTHER INFORMATION: 220-224 are N-lobe Beta Strands
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,
OTHER INFORMATION: 354-357, 362-370, 372-375, 380-383, 390-395,
OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 364-387,
OTHER INFORMATION: and 427-431 are C-lobe Helices
US-09-604-608-2

Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGIGAPLGL 41
Db 9 TQHGIRLPLRSGIGAPLGL 28

RESULT 114
US-09-009-191-2
Sequence 2, Application US/09009191
Patent No. 6319689
GENERAL INFORMATION:
APPLICANT: POWELL, DAVID
APPLICANT: CHAPMAN, CONRAD
APPLICANT: MURPHY, KAY
APPLICANT: SMITH, TRUDI
TITLE OF INVENTION: ASP2
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: RATNER & PRESTIA
STREET: P.O. BOX 980
CITY: VALLEY FORGE
STATE: PA
COUNTRY: USA
ZIP: 19482
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/009,191
FILING DATE: 20-JAN-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: UK 9701684.4
FILING DATE: 28-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: GH-70368
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
TELEFAX: 610-407-0701
TELEX: 846169
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 501 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-009-191-2

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPLRSGIGAPLGL 41
Db 22 TQHGIRLPLRSGIGAPLGL 41

Db 22 TQHGIRLPLRSGIGAPLGL 41

RESULT 115
US-09-548-372D-4
Sequence 4, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 501
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-372D-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGIGAPLGL 41
Db 22 TQHGIRLPLRSGIGAPLGL 41

RESULT 116
US-09-548-367D-4
Sequence 4, Application US/09548367D
Patent No. 6440698
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,367D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 501
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-367D-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPLRSGIGAPLGL 41
Db 22 TQHGIRLPLRSGIGAPLGL 41

```
RESULT 117
US-09-551-853D-4
; Sequence 4, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT FILING DATE: US/09/551,853D
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 118
US-09-724-566A-2
; Sequence 2, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baeti, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NWC2
; CURRENT FILING DATE: US/09/724,566A
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 119
US-09-416-901B-4
; Sequence 4, Application US/09416901B
; Patent No. 6696671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT FILING DATE: US/09/416,901B
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 120
US-09-548-376D-4
; Sequence 4, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT FILING DATE: US/09/548,376D
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-376D-4
```

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 22 TQHGIRLPURSGLGAPLGL 41

RESULT 121

US-09-794-927A-4
Sequence 4, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 4
LENGTH: 501
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-927A-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 22 TQHGIRLPURSGLGAPLGL 41

RESULT 122

US-09-548-373D-4
Sequence 4, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280B
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 501
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-373D-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 22 TQHGIRLPURSGLGAPLGL 41

RESULT 123

US-09-795-847B-4
Sequence 4, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 4
LENGTH: 501
TYPE: PRT
ORGANISM: Homo sapiens
US-09-795-847B-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41
DB 22 TQHGIRLPURSGLGAPLGL 41

RESULT 124

US-09-869-414-4
Sequence 4, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24

```
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 125
US-09-548-366F-4
; Sequence 4, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 126
US-09-949-016-6810
; Sequence 6810, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; FILE REFERENCE: C1001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 6810
```

```
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-6810
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 127
US-09-548-368D-4
; Sequence 4, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 128
US-09-794-925A-4
; Sequence 4, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
```

```
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 129
US-09-471-669A-2
; Sequence 2, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guridbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tateuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Eian Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; CURRENT FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669A-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 130
US-09-806-194A-4
; Sequence 4, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riglang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177 P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
```

```
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 131
US-09-604-608-3
; Sequence 3, Application US/09604608
; Patent No. 6545127
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Lin, Xindi
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: OMRP 179
; CURRENT APPLICATION NUMBER: US/09/604,608
; CURRENT FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/141,363
; PRIOR FILING DATE: 1999-06-28
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: Pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
US-09-604-608-3
```

```
Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      24 TQHGIRLPRLRSGLGAPLGL 43
```

```
RESULT 132
US-09-949-016-10253
; Sequence 10253, Application US/09494016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
```

;; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;; FILE REFERENCE: CLO01307
;; CURRENT APPLICATION NUMBER: US/09/949,016
;; CURRENT FILING DATE: 2000-04-14
;; PRIOR APPLICATION NUMBER: 60/241,755
;; PRIOR FILING DATE: 2000-10-20
;; PRIOR APPLICATION NUMBER: 60/237,768
;; PRIOR FILING DATE: 2000-10-03
;; PRIOR APPLICATION NUMBER: 60/231,498
;; PRIOR FILING DATE: 2000-09-08
;; NUMBER OF SEQ ID NOS: 207012
;; SOFTWARE: FastSeq for Windows Version 4.0
;; SEQ ID NO 10253
;; LENGTH: 578
;; TYPE: PRT
;; ORGANISM: Human
US-09-949-016-10253

Query Match 100.0%; Score 104; DB 1; Length 578;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 99 TQHGIRLPRLRSGLGAPPLGL 118

RESULT 133
US-09-548-372D-73
; Sequence 73, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-372D-73

Query Match 74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 TQHGIRLPRLRSGLGAPPLGL 41

RESULT 134
US-09-548-367D-73
; Sequence 73, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801

;; CURRENT APPLICATION NUMBER: US/09/548,367D
;; CURRENT FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 73
;; LENGTH: 476
;; TYPE: PRT
;; ORGANISM: Mus musculus
US-09-548-367D-73

Query Match 74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 TQHGIRLPRLRSGLGAPPLGL 41

RESULT 135
US-09-551-853D-73
; Sequence 73, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-551-853D-73

Query Match 74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 TQHGIRLPRLRSGLGAPPLGL 41

RESULT 136
US-09-548-376D-73
; Sequence 73, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/62801

```
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-376D-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 TQHGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 137
US-09-548-373D-73
; Sequence 73, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-373D-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 TQHGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 138
US-09-548-366F-73
; Sequence 73, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
```

```
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-366F-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 TQHGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 139
US-09-548-368D-73
; Sequence 73, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-368D-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 TQHGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 140
US-09-713-158-2
; Sequence 2, Application US/09713158
; Patent No. 6361975
; GENERAL INFORMATION:
; APPLICANT: ZHU, YUAN
; APPLICANT: LI, XIAOTONG
; APPLICANT: POWELL, DAVID J.
; APPLICANT: CHRISTIE, GARY
; TITLE OF INVENTION: MOUSE ASPARTIC SECRETASE-2 (MASP-2)
; FILE REFERENCE: GP-70660
```



```

:
: CURRENT APPLICATION NUMBER: US/09/713,158
:
: CURRENT FILING DATE: 2000-11-15
:
: PRIOR APPLICATION NUMBER: 60/165,800
:
: PRIOR FILING DATE: 1999-11-16
:
: NUMBER OF SEQ ID NOS: 2
:
: SOFTWARE: FastSeq for Windows Version 3.0
:
: SEQ ID NO. 2
:
: LENGTH: 501
:
: TYPE: PRT
:
: ORGANISM: MUS MUSCULUS
:
: US-09-713-158-2

```

Query Match	74.0%;	Score 77;	DB 1;	Length 501;
Best Local Similarity	80.0%;	Pred. No. 94;		
Matches 16;	Conservative 0;	Mismatches 4;	Indels 0;	Gaps 0;

QY	22	TQHGIRLP	LRSG	LGAP	IGL	41
Db	22	THLGIRLP	LRSG	LAGP	PIGL	41

```

RESULT 141
US-09-548-372D-8
; Sequence 8, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/52801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-372D-8

```

Query Match	74.0%	Score 77	DB 1	Length 501
Best Local Similarity	80.0%	Pred. No. 94		
Matches	16	Conservative	0	Mismatches 4; Indels 0; Gaps 0.
Qy	22	TDHGIRLPDRSGLAGPVL	41	
db	22	THGIRLPDRSGLAGPVL	41	

```

RESULT 142
US-09-548-367D-8
; Sequence 8, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/5280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881

```

```

: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 60/101,599
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 73
: SOFTWARE: PatentIn version 3.1
: SEQ ID NO: 8
: LENGTH: 501
: TYPE: prt
: ORGANISM: Mus musculus
US-09-548-367D-8

```

Query Match	74.0%;	Score 77;	DB 1;	Length 501;
Best Local Similarity	80.0%;	Pred. No. 94;		
Matches 16;	Conservative	0;	Mismatches 4;	Indels 0;
			Gaps	0;

QY	22 TQHGIRLPRLSGIGGAPLGL 41
Dd	22 THLGIRLPRLSGLAGPPLGL 41

```

RESULT 143
US-09-551-853D-8
: Sequence 8, Application US/09551853D
: Patent No. 6500667
: GENERAL INFORMATION:
: APPLICANT: GURNEY ET AL.
: TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
: TITLE OF INVENTION: THEREOF
: FILE REFERENCE: 29915/6280L
: CURRENT APPLICATION NUMBER: US/09/551,853D
: CURRENT FILING DATE: 2000-04-18
: PRIOR APPLICATION NUMBER: US 60/155,493
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 09/404,133
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: PCT/US99/20881
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 60/101,594
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 73
: SOFTWARE: PatentIn version 3.1
: SEQ ID NO 8
: LENGTH: 501
: TYPE: PRT
: ORGANISM: Mus musculus
: US-09-551-853D-8

```

Query Match	74.0%	Score 77;	DB 1;	Length 501;
Best Local Similarity	80.0%;	Pred. No. 94;		
Matches 16;	Conservative 0;	Mismatches 4;	Indels 0;	Gaps 0.
Oy	22	TØHGIRLPNSGCGAPLGL	41	
db	22	THLGIRLPNSGGLGAPLGL	41	

RESULT 144
US-09-724-566A-65
: Sequence 65, Application US/09724566A
: Patent No. 6627739
: GENERAL INFORMATION:
: APPLICANT: Anderson, John P.
: APPLICANT: Basi, Guribhal
: APPLICANT: Doane, Minh Tam
: APPLICANT: Frigon, No. 6627739mand
: APPLICANT: John, Varjheese
: APPLICANT: Power, Michael
: APPLICANT: Sinha, Sukanto
: APPLICANT: Tatsuno, Gwen
: APPLICANT: Tung, Jay
: APPLICANT: Wang, Shuwen
: APPLICANT: McConlogue, Lisa
: TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and

```
; TITLE OF INVENTION: Methods
; FILE REFERENCE: 228-US-NEMC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 65
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-724-566A-65
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 145
US-09-416-901B-8
; Sequence 8, Application US/09416901B
; Patent No. 6639671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; CURRENT FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-416-901B-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 146
US-09-548-376D-8
; Sequence 8, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
```

```
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-376D-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 147
US-09-794-927A-8
; Sequence 8, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-794-927A-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPPLGL 41
DB 22 THLGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 148
US-09-548-373D-8
; Sequence 8, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
```

```
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-373D-8

Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY      22 THGIRLPRLRSGLGAPPLGL 41
Db      22 THGIRLPRLRSGLGAPPLGL 41

RESULT 149
US-09-795-847B-8
; Sequence 8, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280D
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-795-847B-8

Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY      22 THGIRLPRLRSGLGAPPLGL 41
Db      22 THGIRLPRLRSGLGAPPLGL 41

RESULT 150
US-09-869-414-8
; Sequence 8, Application US/09869414
```

```
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-869-414-8

Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY      22 THGIRLPRLRSGLGAPPLGL 41
Db      22 THGIRLPRLRSGLGAPPLGL 41

RESULT 151
US-09-548-366F-8
; Sequence 8, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-366F-8

Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY      22 THGIRLPRLRSGLGAPPLGL 41
Db      22 THGIRLPRLRSGLGAPPLGL 41

RESULT 152
US-09-548-368D-8
```

```
/ Sequence 8, Application US/09548368D
/ Patent No. 6825023
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280C
/ CURRENT APPLICATION NUMBER: US/09/548,368D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin version 3.1
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-548-368D-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 THGIRLPLRSGLAGPPLGL 41
Db 22 THGIRLPLRSGLAGPPLGL 41
```

```
RESULT 153
US-09-794-925A-8
/ Sequence 8, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-794-925A-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 THGIRLPLRSGLAGPPLGL 41
Db 22 THGIRLPLRSGLAGPPLGL 41
```

RESULT 154

```
US-09-806-194A-8
/ Sequence 8, Application US/09806194A
/ Patent No. 6835565
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowiak, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: Pharmacia & Upjohn Company
/ FILE REFERENCE: 6177.P CP
/ CURRENT APPLICATION NUMBER: US/09/806,194A
/ CURRENT FILING DATE: 2001-09-17
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-806-194A-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 THGIRLPLRSGLAGPPLGL 41
Db 22 THGIRLPLRSGLAGPPLGL 41
```

```
RESULT 155
US-09-471-669A-65
/ Sequence 65, Application US/09471669A
/ Patent No. 6830918
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Basl, Gurigdal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tateano, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Elian Pharmaceuticals, Inc.
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015270-006430US
/ CURRENT APPLICATION NUMBER: US/09/471,669A
/ CURRENT FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: Patentin Ver. 2.1
/ SEQ ID NO 65
/ LENGTH: 427
/ TYPE: PRT
/ ORGANISM: Mus sp.
/ OTHER INFORMATION: pBS/MuimBain H#3 construct
US-09-471-669A-65
```

```
Query Match          29.3%; Score 30.5; DB 1; Length 427;
Best Local Similarity 35.0%; Pred. No. 1.9e+02;
Matches 7; Conservative 3; Mismatches 3; Indels 7; Gaps 1;
```

Oy 27 RLPLRSGL-----GAPL 39
Db 400 RLPARGIHFSGRHRCGAPI 419

RESULT 156

US-09-471-669A-107
Sequence 107, Application US/09471669A

Patent No. 6830918

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6830918mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS

FILE REFERENCE: 015270-006430US

CURRENT APPLICATION NUMBER: US/09/471,669A

PRIOR FILING DATE: 1999-12-24

PRIOR APPLICATION NUMBER: US 60/114,408

PRIOR FILING DATE: 1998-12-31

PRIOR APPLICATION NUMBER: US 60/119,571

PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: US 60/139,172

PRIOR FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 108

SOFTWARE: Patent In Ver. 2.1

SEQ ID NO 107

LENGTH: 231

TYPE: PRT

ORGANISM: Mus sp.

FEATURE:

OTHER INFORMATION: pbs/MuimPain E17 Brain #17 construct

US-09-471-669A-107

Query Match 21.2% Score 22; DB 1; Length 231;
Best Local Similarity 31.2% Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPLRSGLGAPLG 40
Db 68 GVVVPYTGKWEGLG 83

RESULT 157

US-09-724-566A-75
Sequence 75, Application US/09724566A

Patent No. 6627739

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6627739mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and

FILE REFERENCE: 228-US-NEWC2

CURRENT APPLICATION NUMBER: US/09/724,566A

CURRENT FILING DATE: 2000-11-28

PRIOR APPLICATION NUMBER: US 09/501,708

PRIOR FILING DATE: 2000-02-10

PRIOR APPLICATION NUMBER: 60/119,571

PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: 60/139,172

PRIOR FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 104

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 75

LENGTH: 361

TYPE: PRT

ORGANISM: Homo sapiens

US-09-724-566A-75

Query Match 21.2% Score 22; DB 1; Length 361;
Best Local Similarity 31.2% Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPLRSGLGAPLG 40
Db 65 GVVVPYTGKWEGLG 80

RESULT 158

US-09-471-669A-75

Sequence 75, Application US/09471669A

Patent No. 6830918

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6830918mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS

FILE REFERENCE: 015270-006430US

CURRENT APPLICATION NUMBER: US/09/471,669A

PRIOR FILING DATE: 1999-12-24

PRIOR APPLICATION NUMBER: US 60/114,408

PRIOR FILING DATE: 1998-12-31

PRIOR APPLICATION NUMBER: US 60/119,571

PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: US 60/139,172

PRIOR FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 108

SOFTWARE: Patent In Ver. 2.1

SEQ ID NO 75

LENGTH: 361

TYPE: PRT

ORGANISM: Homo sapiens

US-09-471-669A-75

Query Match 21.2% Score 22; DB 1; Length 361;
Best Local Similarity 31.2% Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPLRSGLGAPLG 40
Db 65 GVVVPYTGKWEGLG 80

RESULT 159

US-09-724-566A-71

Sequence 71, Application US/09724566A

Patent No. 6627739

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

```
; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Suktanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEMC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: PatsSeq for Windows Version 4.0
; SEQ ID NO 71
; LENGTH: 374
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-71
```

```
Query Match      21.2%; Score 22; DB 1; Length 374;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy      25 GIRLPLRSLGAPLG 40
      1:|:|:|:|:|
Db      82 GYVVPYTGKWEGLG 97
```

```
RESULT 160
US-09-471-669A-71
; Sequence 71, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Suktanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Eilan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 71
; LENGTH: 374
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669A-71
```

```
Query Match      21.2%; Score 22; DB 1; Length 374;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy      25 GIRLPLRSLGAPLG 40
      1:|:|:|:|:|
Db      82 GYVVPYTGKWEGLG 97
```

```
RESULT 161
US-09-471-669A-108
; Sequence 108, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Suktanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Eilan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 108
; LENGTH: 380
; TYPE: PRT
; ORGANISM: Mus sp.
; FEATURE:
; OTHER INFORMATION: pbs/MuImpain E17 Brain#15 construct
US-09-471-669A-108
```

```
Query Match      21.2%; Score 22; DB 1; Length 380;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy      25 GIRLPLRSLGAPLG 40
      1:|:|:|:|:|
Db      68 GYVVPYTGKWEGLG 83
```

```
RESULT 162
US-09-724-566A-70
; Sequence 70, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Suktanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: Methods
```



```
/ ORGANISM: Homo sapiens
US-09-471-669A-68

Query Match      21.2%; Score 22; DB 1; Length 395;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGUGAPLG 40
      | : | | | |
Db      78 GVVVPTYGKWEGLG 85

RESULT 166
US-09-471-669A-106
/ Sequence 106, Application US/09471669A
/ Patent No. 6830918
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Bassi, Guridbal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tatsuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Elan Pharmaceuticals, Inc.
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015270-006430US
/ CURRENT APPLICATION NUMBER: US/09/471,669A
/ PRIOR FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 106
/ LENGTH: 401
/ TYPE: PRT
/ ORGANISM: Mus sp.
/ FEATURE:
/ OTHER INFORMATION: pbs/Mulimpain E17 #14 construct
US-09-471-669A-106

Query Match      21.2%; Score 22; DB 1; Length 401;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGUGAPLG 40
      | : | | | |
Db      78 GVVVPTYGKWEGLG 93

RESULT 167
US-09-724-566A-58
/ Sequence 58, Application US/09724566A
/ Patent No. 6627739
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Bassi, Guridbal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6627739mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tatsuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
```

```
/ APPLICANT: McConlogue, Lisa
/ TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
/ TITLE OF INVENTION: Methods
/ FILE REFERENCE: 228-US-NEWC2
/ CURRENT APPLICATION NUMBER: US/09/724,566A
/ CURRENT FILING DATE: 2000-11-28
/ PRIOR APPLICATION NUMBER: US 09/501,708
/ PRIOR FILING DATE: 2000-02-10
/ PRIOR APPLICATION NUMBER: 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 104
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 58
/ LENGTH: 407
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-724-566A-58

Query Match      21.2%; Score 22; DB 1; Length 407;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGUGAPLG 40
      | : | | | |
Db      82 GVVVPTYGKWEGLG 97

RESULT 168
US-09-471-669A-58
/ Sequence 58, Application US/09471669A
/ Patent No. 6830918
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Bassi, Guridbal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tatsuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Elan Pharmaceuticals, Inc.
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015270-006430US
/ CURRENT APPLICATION NUMBER: US/09/471,669A
/ CURRENT FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 58
/ LENGTH: 407
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-471-669A-58

Query Match      21.2%; Score 22; DB 1; Length 407;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGUGAPLG 40
      | : | | | |
Db      82 GVVVPTYGKWEGLG 97
```


Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 173

US-09-416-901B-28
; Sequence 28, Application US/09416901B
; Patent No. 669671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-28

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;

Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 174

US-09-548-376D-28
; Sequence 28, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; TITLE OF INVENTION: AND USES
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-376D-28

Query Match 21.2%; Score 22; DB 1; Length 425;

Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 175

US-09-794-927A-28
; Sequence 28, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, App Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280RG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927A-28

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;

Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 176

US-09-548-373D-28
; Sequence 28, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-373D-28

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 177
US-09-795-847B-28
; Sequence 28, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280E
; CURRENT APPLICATION NUMBER: US/09/795.847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847B-28

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 178
US-09-869-414-28
; Sequence 28, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Belkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869.414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-28

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 179
US-09-548-366F-28
; Sequence 28, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548.366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In version 3.1
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-28

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40
| : | | | | |
Db 99 GVVVPYTGKWEGLG 114

RESULT 180
US-09-548-368D-28
; Sequence 28, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548.368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In version 3.1

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; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-28
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Query Match          21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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      | : | | | | |
Db      99 GYVVPYTGKWEGLG 114
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RESULT 181
US-09-794-925A-28
; Sequence 28, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-28
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Query Match          21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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QY      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      99 GYVVPYTGKWEGLG 114
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RESULT 182
US-09-806-194A-28
; Sequence 28, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: US/09/806,194A
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
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; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-28
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Query Match          21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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QY      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      99 GYVVPYTGKWEGLG 114
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RESULT 183
US-09-724-566A-69
; Sequence 69, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guridbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NBWC2
; CURRENT FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 69
; LENGTH: 439
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-69
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Query Match          21.2%; Score 22; DB 1; Length 439;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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QY      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      65 GYVVPYTGKWEGLG 80
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```
RESULT 184
US-09-471-669A-69
; Sequence 69, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guridbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Wang, Jay
; APPLICANT: Wang, Shuwen
```

? APPLICANT: McConlogue, Lisa
 ? APPLICANT: Elian Pharmaceuticals, Inc.
 ? TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
 ? FILE REFERENCE: 015270-006430US
 ? CURRENT APPLICATION NUMBER: US/09/471,669A
 ? CURRENT FILING DATE: 1999-12-24
 ? PRIOR APPLICATION NUMBER: US 60/114,408
 ? PRIOR FILING DATE: 1998-12-31
 ? PRIOR APPLICATION NUMBER: US 60/119,571
 ? PRIOR FILING DATE: 1999-02-10
 ? PRIOR APPLICATION NUMBER: US 60/139,172
 ? PRIOR FILING DATE: 1999-06-15
 ? NUMBER OF SEQ ID NOS: 108
 ? SOFTWARE: PatentIn Ver. 2.1
 ? SEQ ID NO 69
 ? LENGTH: 439
 ? TYPE: PRT
 ? ORGANISM: Homo sapiens
 ? US-09-471-669A-69

Query Match	21.2%	Score 22;	DB 1;	Length 439;
Best Local Similarity	31.2%;	Pred. No. 1.9e+02;		
Matches	5;	Conservative	2;	Mismatches 9;
				Indels 0;
				Gaps 0;

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Qy      25 GIRLPLRSGLGAPLG 40
      |: :| |
Db      65 GVVVPTYQGKMEGELG 80
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RESULT 185

```

US-09-724-566A-67
Sequence 67, Application US/09724566A
Patent No. 6627739
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Baati, Guriqbal
APPLICANT: Doane, Minh Tam
APPLICANT: Frisgon, No. 6627739mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
FILE REFERENCE: 228-US-NEMC2
CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 67
LENGTH: 444
TYPE: PRT
ORGANISM: Homo sapiens
US-09-724-566A-67

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Query Match	21.2%	Score 22;	DB 1;	Length 444;
Best Local Similarity	31.2%;	Pred. No. 1.9e+02;		
Matches	5;	Conservative	2;	Mismatches 9;
				Indels 0;
				Gaps 0;

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Qy      25 GIRLPLRSGLGAPLG 40
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Db      70 GVVVPTYQGKWEGETG 85
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RESULT. 186
US-09-471-669A-67
; Sequence 67, Application US/09471669A
; Patent No. 6830918

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/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Basl, Guripal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tatsuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Eian Pharmaceuticals, Inc.
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015210-006430US
/ CURRENT APPLICATION NUMBER: US/09/471, 669A
/ CURRENT FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: PatentIn Ver. 2.1

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; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-09-471-669A-67

Query Match	21.2%	Score 22;	DB 1;	Length 444;
Best Local Similarity	31.2%	Pred. No. 1.9e+02;		
Matches	5;	Conservative	2;	Mismatches 9;
				Indels 0;
				Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40
| : | |
Db 70 GVVFPYTGKWEGLG 85

RESULT 187

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US-09-724-566A-43
; Sequence 43, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Bassi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-secretase Enzyme Compositions and
; TITLE OF INVENTION: Methods
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; CURRENT FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FASTSEQ for Windows Version 4.0

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; SEQ ID NO 43
; LENGTH: 456
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-43

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Query Match      21.2%; Score 22; DB 1; Length 456;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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QY      25 GIRLPRLRSGLGAPLG 40
      | : : |
Db      82 GVVVPYTGCKWEGELG 97
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RESULT 188
 US-09-471-669A-43
 / Sequence 43, Application US/09471669A
 / Patent No. 6830918
 / GENERAL INFORMATION:
 / APPLICANT: Anderson, John P.
 / APPLICANT: Basi, Guripal
 / APPLICANT: Doane, Minh Tam
 / APPLICANT: Frigon, No. 6830918mand
 / APPLICANT: John, Varghese
 / APPLICANT: Power, Michael
 / APPLICANT: Sinha, Sukanto
 / APPLICANT: Tatsuno, Gwen
 / APPLICANT: Tung, Jay
 / APPLICANT: Wang, Shuwen
 / APPLICANT: McConlogue, Lisa
 / APPLICANT: Elian Pharmaceuticals, Inc.
 / TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
 / FILE REFERENCE: 015270-006430US
 / CURRENT APPLICATION NUMBER: US/09/471,669A
 / CURRENT FILING DATE: 1999-12-24
 / PRIOR APPLICATION NUMBER: US 60/114,408
 / PRIOR FILING DATE: 1998-12-31
 / PRIOR APPLICATION NUMBER: US 60/119,571
 / PRIOR FILING DATE: 1999-02-10
 / PRIOR APPLICATION NUMBER: US 60/139,172
 / PRIOR FILING DATE: 1999-06-15
 / NUMBER OF SEQ ID NOS: 108
 / SOFTWARE: PatentIn Ver. 2.1
 / SEQ ID NO 43
 / LENGTH: 456
 / TYPE: PRT
 / ORGANISM: Homo sapiens
 / US-09-471-669A-43

Query Match	21.2%	Score 22	DB 1	Length 456
Best Local Similarity	31.2%	Pred. No. 1.9e+02		
Matches	5	Conservative	2	Mismatches 9; Indels 0; Gaps 0;

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QY      25 GIRLPLRSGLGAPLG 40
      1: : |
Db      82 GVVVPTYQGKWEGLG 97
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RESULT 189
 US-09-009-191-4
 / Sequence 4. Application US/09009191
 / Patent No. 6319689
 / GENERAL INFORMATION:
 / APPLICANT: POWELL, DAVID
 / APPLICANT: CHAPMAN, CONRAD
 / APPLICANT: MURPHY, KAY
 / APPLICANT: SMITH, TRUDI
 / TITLE OF INVENTION: ASP2
 / NUMBER OF SEQUENCES: 6
 / CORRESPONDENCE ADDRESS:
 / ADDRESSEE: RAINIER & PRESTITA
 / STREET: P.O. BOX 960

```

1CITY: VALLEY FORGE
2STATE: PA
3COUNTRY: USA
4ZIP: 19482
5
6COMPUTER READABLE FORM:
7MEDIUM TYPE: Diskette
8COMPUTER: IBM Compatible
9OPERATING SYSTEM: DOS
10SOFTWARE: FASTSEQ for Windows Version 2.0
11CURRENT APPLICATION DATA:
12APPLICATION NUMBER: US/09/009,191
13FILING DATE: 20-JAN-1998
14
15CLASSIFICATION:
16
17PRIOR APPLICATION DATA:
18APPLICATION NUMBER: UK 9701684.4
19FILING DATE: 28-JAN-1997
20
21ATTORNEY/AGENT INFORMATION:
22NAME: PRESTIA, PAUL F
23REGISTRATION NUMBER: 23,031
24REFERENCE/DOCKET NUMBER: GH-70368
25TELECOMMUNICATION INFORMATION:
26TELEPHONE: 610-407-0700
27TELEFAX: 610-407-0701
28
29TELEX: 846169
30
31INFORMATION FOR SEQ ID NO: 4:
32SEQUENCE CHARACTERISTICS:
33LENGTH: 774 amino acids
34TYPE: amino acid
35STRANDEDNESS: single
36TOPOLOGY: linear
37
38MOLECULE TYPE: protein
39
40US-09-009-191-4

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Query Match	21.2%	Score 22;	DB 1;	Length 774;
Best Local Similarity	80.0%;	Pred. No. 1.9e+02;		
Matches	4;	Conservative	0;	Mismatches 1;
			Indels	0;
			Gaps	0;

QY	22	TQHG	26
Db	713	TTHGI	717

Search completed: August 3, 2005, 11:49:32
Job time : 2 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: August 3, 2005, 11:50:12 ; Search time 1 Seconds

(without alignments)
2.122 Million cell updates/sec

Title: us-10-726-967a-1

Perfect score: 104
Sequence: 1 TQCHIRPLRSLGGLGAPLGL 20Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 230 seqs, 106093 residues

Total number of hits satisfying chosen parameters: 230

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 500 summaries

Database : rapbdb:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	104	100.0	425 1 US-10-372-473-3	Sequence 3, Appli
2	104	100.0	428 1 US-09-794-927-51	Sequence 51, Appli
3	104	100.0	428 1 US-09-795-847-51	Sequence 51, Appli
4	104	100.0	428 1 US-09-794-743-51	Sequence 51, Appli
5	104	100.0	428 1 US-09-794-748-51	Sequence 51, Appli
6	104	100.0	428 1 US-09-794-925-51	Sequence 51, Appli
7	104	100.0	428 1 US-09-681-442-51	Sequence 51, Appli
8	104	100.0	428 1 US-09-869-414-51	Sequence 51, Appli
9	104	100.0	428 1 US-09-548-366-51	Sequence 51, Appli
10	104	100.0	428 1 US-10-652-927-51	Sequence 51, Appli
11	104	100.0	428 1 US-10-652-830-51	Sequence 51, Appli
12	104	100.0	428 1 US-10-652-045-51	Sequence 51, Appli
13	104	100.0	428 1 US-10-476-935-51	Sequence 51, Appli
14	104	100.0	428 1 US-10-477-076-51	Sequence 51, Appli
15	104	100.0	432 1 US-10-372-473-2	Sequence 2, Appli
16	104	100.0	433 1 US-09-794-927-26	Sequence 26, Appli
17	104	100.0	433 1 US-09-795-847-26	Sequence 26, Appli
18	104	100.0	433 1 US-09-794-743-26	Sequence 26, Appli
19	104	100.0	433 1 US-09-794-748-26	Sequence 26, Appli
20	104	100.0	433 1 US-09-794-925-26	Sequence 26, Appli
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26	104	100.0	433 1 US-10-652-045-26	Sequence 26, Appli
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29	104	100.0	433 1 US-10-726-967A-78	Sequence 78, Appli
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31	104	100.0	433 1 US-10-726-967A-84	Sequence 84, Appli
32	104	100.0	433 1 US-10-477-076-26	Sequence 26, Appli
33	104	100.0	434 1 US-09-794-927-53	Sequence 53, Appli

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47	104	100.0	439 1 US-10-726-967A-76	Sequence 76, Appli
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82	104	100.0	456 1 US-10-281-092-8	Sequence 8, Appli
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106	104	100.0	459 1 US-10-476-935-24	Sequence 24, Appli

107	104	100.0	459	1	US-10-476-935-32	Sequence 32, Appl	180	104	100.0	503	1	US-10-032-818-3	Sequence 3, Appl
108	104	100.0	459	1	US-10-940-867-24	Sequence 24, Appl	181	104	100.0	503	1	US-10-820-953-3	Sequence 3, Appl
109	104	100.0	459	1	US-10-940-867-32	Sequence 32, Appl	182	104	100.0	503	1	US-10-773-754-3	Sequence 3, Appl
110	104	100.0	459	1	US-10-477-076-24	Sequence 24, Appl	183	104	100.0	509	1	US-10-275-339A-7	Sequence 7, Appl
111	104	100.0	459	1	US-10-477-076-32	Sequence 32, Appl	184	77	74.0	501	1	US-09-794-927-8	Sequence 8, Appl
112	104	100.0	461	1	US-10-627-473-18	Sequence 18, Appl	185	77	74.0	501	1	US-09-795-847-8	Sequence 8, Appl
113	104	100.0	461	1	US-10-627-473-4	Sequence 4, Appl	186	77	74.0	501	1	US-09-794-743-8	Sequence 8, Appl
114	104	100.0	461	1	US-10-627-473-12	Sequence 12, Appl	187	77	74.0	501	1	US-09-794-743-8	Sequence 8, Appl
115	104	100.0	461	1	US-10-627-473-16	Sequence 16, Appl	188	77	74.0	501	1	US-09-794-743-8	Sequence 8, Appl
116	104	100.0	476	1	US-09-794-927-6	Sequence 6, Appl	189	77	74.0	501	1	US-09-681-442-8	Sequence 8, Appl
117	104	100.0	476	1	US-09-795-847-6	Sequence 6, Appl	190	77	74.0	501	1	US-09-681-442-8	Sequence 8, Appl
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119	104	100.0	476	1	US-09-794-743-6	Sequence 6, Appl	192	77	74.0	501	1	US-09-548-366-8	Sequence 8, Appl
120	104	100.0	476	1	US-09-794-743-6	Sequence 6, Appl	193	77	74.0	501	1	US-10-652-927-8	Sequence 8, Appl
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122	104	100.0	476	1	US-09-681-442-6	Sequence 6, Appl	195	77	74.0	501	1	US-10-652-927-8	Sequence 8, Appl
123	104	100.0	476	1	US-09-869-414-6	Sequence 6, Appl	196	77	74.0	501	1	US-10-476-935-8	Sequence 8, Appl
124	104	100.0	476	1	US-09-548-366-6	Sequence 6, Appl	197	77	74.0	501	1	US-10-476-935-8	Sequence 8, Appl
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126	104	100.0	476	1	US-10-652-927-6	Sequence 6, Appl	199	22	21.2	358	1	US-10-872-198-12	Sequence 8, Appl
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128	104	100.0	476	1	US-10-476-935-6	Sequence 6, Appl	201	22	21.2	391	1	US-10-372-473-4	Sequence 4, Appl
129	104	100.0	476	1	US-10-801-487-4	Sequence 6, Appl	202	22	21.2	403	1	US-10-400-273-4	Sequence 4, Appl
130	104	100.0	476	1	US-10-801-938-4	Sequence 4, Appl	203	22	21.2	406	1	US-10-837-021A-2	Sequence 2, Appl
131	104	100.0	476	1	US-10-801-509-4	Sequence 4, Appl	204	22	21.2	406	1	US-10-837-021A-3	Sequence 3, Appl
132	104	100.0	476	1	US-10-940-867-6	Sequence 6, Appl	205	22	21.2	406	1	US-10-837-021A-5	Sequence 5, Appl
133	104	100.0	476	1	US-10-940-867-6	Sequence 6, Appl	206	22	21.2	406	1	US-10-837-021A-5	Sequence 5, Appl
134	104	100.0	476	1	US-10-477-076-6	Sequence 6, Appl	207	22	21.2	411	1	US-10-400-273-5	Sequence 5, Appl
135	104	100.0	488	1	US-09-796-264-2	Sequence 6, Appl	208	22	21.2	411	1	US-10-400-273-5	Sequence 5, Appl
136	104	100.0	488	1	US-09-796-264-2	Sequence 6, Appl	209	22	21.2	411	1	US-10-627-473-19	Sequence 19, Appl
137	104	100.0	488	1	US-09-845-226-2	Sequence 2, Appl	210	22	21.2	414	1	US-10-627-473-20	Sequence 20, Appl
138	104	100.0	488	1	US-09-795-903A-2	Sequence 2, Appl	211	22	21.2	417	1	US-10-81-092-9	Sequence 9, Appl
139	104	100.0	488	1	US-10-032-818-2	Sequence 2, Appl	212	22	21.2	417	1	US-10-627-473-21	Sequence 21, Appl
140	104	100.0	488	1	US-10-820-953-2	Sequence 2, Appl	213	22	21.2	425	1	US-09-794-927-28	Sequence 28, Appl
141	104	100.0	488	1	US-10-773-754-2	Sequence 2, Appl	214	22	21.2	425	1	US-09-795-847-28	Sequence 28, Appl
142	104	100.0	501	1	US-09-794-927-2	Sequence 2, Appl	215	22	21.2	425	1	US-09-794-743-28	Sequence 28, Appl
143	104	100.0	501	1	US-09-795-847-4	Sequence 4, Appl	216	22	21.2	425	1	US-09-794-743-28	Sequence 28, Appl
144	104	100.0	501	1	US-09-794-743-4	Sequence 4, Appl	217	22	21.2	425	1	US-09-794-925-28	Sequence 28, Appl
145	104	100.0	501	1	US-09-794-748-4	Sequence 4, Appl	218	22	21.2	425	1	US-09-794-925-28	Sequence 28, Appl
146	104	100.0	501	1	US-09-794-925-4	Sequence 4, Appl	219	22	21.2	425	1	US-09-681-442-28	Sequence 28, Appl
147	104	100.0	501	1	US-09-681-442-4	Sequence 4, Appl	220	22	21.2	425	1	US-09-869-414-28	Sequence 28, Appl
148	104	100.0	501	1	US-09-908-943A-2	Sequence 2, Appl	221	22	21.2	425	1	US-10-548-366-28	Sequence 28, Appl
149	104	100.0	501	1	US-09-908-943A-2	Sequence 2, Appl	222	22	21.2	425	1	US-10-652-927-28	Sequence 28, Appl
150	104	100.0	501	1	US-09-869-414-4	Sequence 4, Appl	223	22	21.2	425	1	US-10-652-927-28	Sequence 28, Appl
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154	104	100.0	501	1	US-10-308-365-2	Sequence 2, Appl	227	22	21.2	774	1	US-10-872-198-139	Sequence 28, Appl
155	104	100.0	501	1	US-10-372-730-9	Sequence 9, Appl	228	22	21.2	774	1	US-09-969-671A-4	Sequence 139, App
156	104	100.0	501	1	US-10-372-730-9	Sequence 9, Appl	229	22	21.2	774	1	US-10-308-365-4	Sequence 4, Appl
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158	104	100.0	501	1	US-10-652-927-4	Sequence 4, Appl						US-10-726-967A-52	Sequence 52, Appl
159	104	100.0	501	1	US-10-281-092-6	Sequence 6, Appl							
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162	104	100.0	501	1	US-10-652-045-4	Sequence 4, Appl							
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168	104	100.0	501	1	US-10-801-509-2	Sequence 2, Appl							
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174	104	100.0	501	1	US-10-477-076-4	Sequence 4, Appl							
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176	104	100.0	501	1	US-10-466-391A-2	Sequence 2, Appl							
177	104	100.0	503	1	US-09-796-264-3	Sequence 3, Appl							
178	104	100.0	503	1	US-09-845-226-3	Sequence 3, Appl							
179	104	100.0	503	1	US-09-795-903A-3	Sequence 3, Appl							

ALIGNMENTS

RESULT 1
US-10-372-473-3
; Sequence 3, Application US/10372473
; Publication No. US20040005691A1
; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; APPLICANT: Howe, W. Jeffery
; TITLE OF INVENTION: Modified BACE
; FILE REFERENCE: MBH 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 3
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens

Best Local	Similarity	100.0%	Pred. No. 38	Indels	Gaps
Matches	20	Conservative	0	Mismatches	0

Oy 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 5

US-09-794-748-51
Sequence 51, Application US/09794748
Patent No. US20020037315A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280JL
CURRENT FILING DATE: US/09/794,748
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 51
LENGTH: 428
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-794-748-51

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 6

US-09-794-925-51
Sequence 51, Application US/09794925
Patent No. US20020064819A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280H1
CURRENT FILING DATE: US/09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 51
LENGTH: 428
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-794-925-51

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 7

US-09-681-442-51
Sequence 51, Application US/09681442
Patent No. US20020081634A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT FILING DATE: US/09/681,442
PRIOR FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 51
LENGTH: 428
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-681-442-51

Query Match 100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 8

US-09-869-414-51
Sequence 51, Application US/09869414
Publication No. US20030077226A1

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; GENERAL INFORMATION:
; APPLICANT: Benkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
; US-09-869-414-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLSGGCGAPLGL 41
DB      22 TQHGIRLPRLSGGCGAPLGL 41

RESULT 9
; US-09-548-366-51
; Sequence 51, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Benkowski, Michael J.
; APPLICANT: Heinrichson, Robert U.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
; US-09-548-366-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLSGGCGAPLGL 41
DB      22 TQHGIRLPRLSGGCGAPLGL 41
```

```

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLSGGCGAPLGL 41
DB      22 TQHGIRLPRLSGGCGAPLGL 41

RESULT 10
; US-10-652-927-51
; Sequence 51, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
; US-10-652-927-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLSGGCGAPLGL 41
DB      22 TQHGIRLPRLSGGCGAPLGL 41

RESULT 11
; US-10-652-830-51
; Sequence 51, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
```

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/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Aap2(b) delta TM
US-10-652-830-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 12
US-10-652-045-51
/ Sequence 51, Application US/10652045
/ Publication No. US20040166507A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N2
/ CURRENT APPLICATION NUMBER: US/10/652,045
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Aap2(b) delta TM
US-10-652-045-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 13
US-10-476-935-51
/ Sequence 51, Application US/10476935
/ Publication No. US20040234976A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M1
/ CURRENT APPLICATION NUMBER: US/10/476,935
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
```

```
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-10-477-076-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 14
US-10-477-076-51
/ Sequence 51, Application US/10477076
/ Publication No. US20050080232A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M2
/ CURRENT APPLICATION NUMBER: US/10/477,076
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: delta TM
US-10-477-076-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPRLRSGLGAPLGL 41
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 15
US-10-372-473-2
/ Sequence 2, Application US/10372473
/ Publication No. US20040005691A1
```

```

; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; TITLE OF INVENTION: Modified BACE
; FILE REFERENCE: MBHB 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; CURRENT FILING DATE: 2003-02-21
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 2
; LENGTH: 432
; TYPE: PRT
; ORGANISM: Homo sapiens
; NAME/KEY: MISC_FEATURE
; OTHER INFORMATION: Amino acid sequence of human BACE with P33K mutation.
US-10-372-473-2

Query Match          100.0%; Score 104; DB 1; Length 432;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||
Db      1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 16
US-09-794-927-26
; Sequence 26, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||
Db      1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 17
US-09-795-847-26
; Sequence 26, Application US/09795847
```

```

; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||
Db      2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 18
US-09-794-743-26
; Sequence 26, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-26
```

```
Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLP LRSGLGAPLGL 41
Db      2 T0HGIRLP LRSGLGAPLGL 21

RESULT 19
US-09-794-748-26
; Sequence 26, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-748-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLP LRSGLGAPLGL 41
Db      2 T0HGIRLP LRSGLGAPLGL 21

RESULT 20
US-09-794-925-26
; Sequence 26, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLP LRSGLGAPLGL 41
Db      2 T0HGIRLP LRSGLGAPLGL 21

RESULT 21
US-09-681-442-26
; Sequence 26, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLP LRSGLGAPLGL 41
Db      2 T0HGIRLP LRSGLGAPLGL 21

RESULT 22
US-09-869-414-26
; Sequence 26, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280W
```

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; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
Db      2 TONGIRLPLRSGLGAPLGL 21
```

```

RESULT 23
US-09-548-366-26
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```

; Sequence 26, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
Db      2 TONGIRLPLRSGLGAPLGL 21
```

```

RESULT 24
US-10-652-927-26
; Sequence 26, Application US/10652927
; Publication No. US20040043408A1
```

```

; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-927-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
Db      2 TONGIRLPLRSGLGAPLGL 21
```

```

RESULT 25
US-10-652-830-26
```

```

; Sequence 26, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-830-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
Db      2 TONGIRLPLRSGLGAPLGL 21
```

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 26

US-10-652-045-26
; Sequence 26, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-045-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 27

US-10-476-935-26
; Sequence 26, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-476-935-26

Query Match 100.0%; Score 104; DB 1; Length 433;

Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 28

US-10-940-867-26
; Sequence 26, Application US/10940867
; Publication No. US20050026255A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Rigiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; PRIOR FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-940-867-26

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 29

US-10-726-967A-78
; Sequence 78, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Ballinger, Marcus
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Stre
; FILE REFERENCE: 20043450021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; PRIOR FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 78
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Soluble human PROBACE1 containing an engineered RLPL site
US-10-726-967A-78

Query Match 100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41

Db 1 TOHGIRLPLRSGLGAPLGL 20


```
RESULT 30
US-10-726-967A-81
; Sequence 81, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Ballinger, Marcus
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 81
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Artificial
; OTHER INFORMATION: Soluble human PROBACE1
US-10-726-967A-81

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 31
US-10-726-967A-84
; Sequence 84, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Ballinger, Marcus
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 84
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Artificial
; OTHER INFORMATION: Soluble human PROBACE1 containing an engineered E1NL site
; OTHER INFORMATION: starting at position 21
US-10-726-967A-84

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 32
US-10-477-076-26
; Sequence 26, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
```

```
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-477-076-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 33
US-09-794-927-53
; Sequence 53, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-App2 (b)
; OTHER INFORMATION: delta TM
US-09-794-927-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 34
US-09-795-847-53
; Sequence 53, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-795-847-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 35
US-09-794-743-53
; Sequence 53, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
```

```
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-743-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 36
US-09-794-748-53
; Sequence 53, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-748-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 37
US-09-794-925-53
; Sequence 53, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
```

```
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280H1
CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIORITY APPLICATION NUMBER: 09/416,901
PRIORITY FILING DATE: 1999-10-13
PRIORITY APPLICATION NUMBER: 60/155,493
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 60/101,594
PRIORITY FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 53
LENGTH: 434
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-794-925-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 38
US-09-681-442-53
Sequence 53, Application US/09681442
Patent No. US20020081634A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
PRIORITY APPLICATION NUMBER: 09/416,901
PRIORITY FILING DATE: 1999-10-13
PRIORITY APPLICATION NUMBER: 60/155,493
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 60/101,594
PRIORITY FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 53
LENGTH: 434
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-681-442-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 39
US-09-869-414-53
Sequence 53, Application US/09869414
Publication No. US20030077226A1
GENERAL INFORMATION:
APPLICANT: Beinowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIORITY APPLICATION NUMBER: 09/416,901
PRIORITY FILING DATE: 1999-10-13
PRIORITY APPLICATION NUMBER: 60/155,493
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 60/101,594
PRIORITY FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 53
LENGTH: 434
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-869-414-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 40
US-09-548-366-53
Sequence 53, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: USES THEREFOR
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366
CURRENT FILING DATE: 2000-04-12
PRIORITY APPLICATION NUMBER: 60/155,493
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 60/101,594
```

;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 65
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aep2(b)
;; OTHER INFORMATION: delta TM
US-09-548-366-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLNSGLGAPLGL 41
Db 22 TOHGIRLPRLNSGLGAPLGL 41

RESULT 41
US-10-652-927-53
;; Sequence 53, Application US/10652927
;; Publication No. US20040043408A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N3
;; CURRENT APPLICATION NUMBER: US/10/652,927
;; PRIOR FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-10-652-927-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLNSGLGAPLGL 41
Db 22 TOHGIRLPRLNSGLGAPLGL 41

RESULT 42
US-10-652-830-53
;; Sequence 53, Application US/10652830
;; Publication No. US20040048303A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N1
;; CURRENT APPLICATION NUMBER: US/10/652,830

;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-10-652-830-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLNSGLGAPLGL 41
Db 22 TOHGIRLPRLNSGLGAPLGL 41

RESULT 43
US-10-652-045-53
;; Sequence 53, Application US/10652045
;; Publication No. US2004016507A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N2
;; CURRENT APPLICATION NUMBER: US/10/652,045
;; PRIOR FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 53
;; LENGTH: 434
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-10-652-045-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLNSGLGAPLGL 41
Db 22 TOHGIRLPRLNSGLGAPLGL 41

RESULT 44
US-10-476-935-53
; Sequence 53, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Belkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-10-476-935-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 45
US-10-477-076-53
; Sequence 53, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Belkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-10-477-076-53

Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 46
US-10-400-273-2
; Sequence 2, Application US/10400273
; Publication No. US20040014194A1
; GENERAL INFORMATION:
; APPLICANT: Beyer, Brian
; APPLICANT: Hammond, Gerald S
; APPLICANT: Reichert, Paul
; APPLICANT: Strickland, Corey
; APPLICANT: Wang, Wenyan
; APPLICANT: Weber, Patricia C
; APPLICANT: Wong, Gwendolyn
; APPLICANT: Zhang, Lili
; TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S
; FILE REFERENCE: JBO1531-K-US
; CURRENT APPLICATION NUMBER: US/10/400,273
; CURRENT FILING DATE: 2003-03-26
; PRIOR APPLICATION NUMBER: 60/367,937
; PRIOR FILING DATE: 2002-03-27
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 435
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-400-273-2

Query Match 100.0%; Score 104; DB 1; Length 435;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 47
US-10-726-967A-76
; Sequence 76, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Ballinger, Marcus
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 76
; LENGTH: 439
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Soluble human pro BACE1 with engineered thrombin cleavage site
; OTHER INFORMATION: starting at position 25
US-10-726-967A-76

Query Match 100.0%; Score 104; DB 1; Length 439;
Best Local Similarity 100.0%; Pred. No. 40;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41

Db 1 T0HGIRLPLRSGLGAPLGL 20

RESULT 48

US-09-794-927-22
Sequence 22, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280FC
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-927-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 49

US-09-795-847-22
Sequence 22, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-795-847-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 50

US-09-794-743-22
Sequence 22, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 22
LENGTH: 446
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-743-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 51

US-09-794-748-22
Sequence 22, Application US/09794748
Patent No. US20020037315A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2002-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24

FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-748-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
DB 15 TONGIRLPLRSGLGAPLGL 34

RESULT 52
US-09-794-925-22
; Sequence 22, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
DB 15 TONGIRLPLRSGLGAPLGL 34

RESULT 53

US-09-681-442-22
; Sequence 22, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
DB 15 TONGIRLPLRSGLGAPLGL 34

RESULT 54
US-09-869-414-22
; Sequence 22, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 55
US-09-548-366-22
; Sequence 22, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van, Ridgand
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366-22

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 446;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 56
US-10-652-927-22
; Sequence 22, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446

; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-927-22

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 446;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 57
US-10-652-830-22
; Sequence 22, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-830-22

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 446;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 58
US-10-652-045-22
; Sequence 22, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881

;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 22
;; LENGTH: 446
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-045-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 59
US-10-476-935-22

;; Sequence 22, Application US/10476935
;; Publication No. US20040234976A1
;; GENERAL INFORMATION:
;; APPLICANT: Beinkowski et al.
;; TITLE OF INVENTION: THEREFOR
;; FILE REFERENCE: 28341/6280M1
;; CURRENT FILING DATE: 2003-11-06
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 22
;; LENGTH: 446
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-476-935-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 60
US-10-940-867-22

;; Sequence 22, Application US/10940867
;; Publication No. US20050026256A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrikson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; APPLICANT: Pharmacia & Upjohn Company
;; TITLE OF INVENTION: Alzheimer's Disease Secretase
;; FILE REFERENCE: 6177.PCPA
;; CURRENT APPLICATION NUMBER: US/10/940,867
;; CURRENT FILING DATE: 2004-09-14

;; PRIOR APPLICATION NUMBER: US 09/806,194
;; PRIOR FILING DATE: 2001-03-26
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 49
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 22
;; LENGTH: 446
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-940-867-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 61
US-10-477-076-22

;; Sequence 22, Application US/10477076
;; Publication No. US20050080232A1
;; GENERAL INFORMATION:
;; APPLICANT: Beinkowski et al.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; FILE REFERENCE: 28341/6280M2
;; CURRENT FILING DATE: 2003-11-06
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 22
;; LENGTH: 446
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-477-076-22

Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 41;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 62
US-09-794-927-30

;; Sequence 30, Application US/09794927
;; Patent No. US20010016324A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrikson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; APPLICANT: Alzheimer's Disease Secretase, APP SUBSTRATES THEREFOR, AND
;; TITLE OF INVENTION: USES
;; FILE REFERENCE: 28341/6280FG

```
/ CURRENT APPLICATION NUMBER: US/09/794,927
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-794-927-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 TOHGIRLPLRSGLGAPLGL 41
Db      22 TOHGIRLPLRSGLGAPLGL 41
```

```
RESULT 63
US-09-795-847-30
/ Sequence 30, Application US/09795847
/ Patent No. US20010018208A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ FILE REFERENCE: 28341/6280DE
/ CURRENT APPLICATION NUMBER: US/09/795,847
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-795-847-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TOHGIRLPLRSGLGAPLGL 41
Db      22 TOHGIRLPLRSGLGAPLGL 41
```

RESULT 64

```
US-09-794-743-30
/ Sequence 30, Application US/09794743
/ Patent No. US20010021391A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ FILE REFERENCE: 28341/6280BC
/ CURRENT APPLICATION NUMBER: US/09/794,743
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-794-743-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TOHGIRLPLRSGLGAPLGL 41
Db      22 TOHGIRLPLRSGLGAPLGL 41
```

```
RESULT 65
US-09-794-748-30
/ Sequence 30, Application US/09794748
/ Patent No. US20020037315A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ FILE REFERENCE: 28341/6280JL
/ CURRENT APPLICATION NUMBER: US/09/794,748
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
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ORGANISM: Homo sapiens
US-09-794-748-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPKRSGLGAPLGL 41
DB 22 TOHGIRLPKRSGLGAPLGL 41

RESULT 66
US-09-794-925-30

Sequence 30, Application US/09794925
Patent No. US20020064819A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280H1

CURRENT APPLICATION NUMBER: US/09/794,925

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 30

LENGTH: 453

TYPE: PRT

ORGANISM: Homo sapiens

US-09-794-925-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 42;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPKRSGLGAPLGL 41
DB 22 TOHGIRLPKRSGLGAPLGL 41

RESULT 67
US-09-681-442-30

Sequence 30, Application US/09681442
Patent No. US20020081634A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280FG

CURRENT APPLICATION NUMBER: US/09/681,442

CURRENT FILING DATE: 2001-04-05

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 30

LENGTH: 453

TYPE: PRT

ORGANISM: Homo sapiens

US-09-681-442-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 42;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPKRSGLGAPLGL 41
DB 22 TOHGIRLPKRSGLGAPLGL 41

RESULT 68
US-09-869-414-30

Sequence 30, Application US/09869414
Publication No. US20030077226A1

GENERAL INFORMATION:

APPLICANT: Bienkowski et al.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280M

CURRENT APPLICATION NUMBER: US/09/869,414

CURRENT FILING DATE: 2001-06-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 30

LENGTH: 453

TYPE: PRT

ORGANISM: Homo sapiens

US-09-869-414-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 42;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPKRSGLGAPLGL 41
DB 22 TOHGIRLPKRSGLGAPLGL 41

RESULT 69
US-09-548-366-30

Sequence 30, Application US/09548366
Publication No. US20030104365A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR

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/ FILE REFERENCE: 28341/6280A
/ CURRENT APPLICATION NUMBER: US/09/548,366
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-366-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAGAPLGL 41
Db      22 TOHGIRLPRLRSGGAGAPLGL 41
```

```
RESULT 70
US-10-652-927-30
/ Sequence 30, Application US/10652927
/ Publication No. US20040043408A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N3
/ CURRENT APPLICATION NUMBER: US/10/652,927
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-927-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAGAPLGL 41
Db      22 TOHGIRLPRLRSGGAGAPLGL 41
```

```
RESULT 71
US-10-652-830-30
/ Sequence 30, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
```

```
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
/ CURRENT APPLICATION NUMBER: US/10/652,830
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-830-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAGAPLGL 41
Db      22 TOHGIRLPRLRSGGAGAPLGL 41
```

```
RESULT 72
US-10-652-045-30
/ Sequence 30, Application US/10652045
/ Publication No. US20040166507A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N2
/ CURRENT APPLICATION NUMBER: US/10/652,045
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 30
/ LENGTH: 453
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-045-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAGAPLGL 41
Db      22 TOHGIRLPRLRSGGAGAPLGL 41
```

RESULT 73
US-10-476-935-30
; Sequence 30, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M1
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-476-935-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41
|||
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 74
US-10-940-867-30
; Sequence 30, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US/10/940,867
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-940-867-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41
|||

Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 75
US-10-477-076-30
; Sequence 30, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M2
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: US/10/477,076
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-477-076-30

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41
|||
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 76
US-10-627-473-10
; Sequence 10, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: US/10/627,473
; PRIOR FILING DATE: 2002-07-26
; PRIOR APPLICATION NUMBER: 60/398,681
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
; LENGTH: 454
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-10

Query Match 100.0%; Score 104; DB 1; Length 454;
Best Local Similarity 100.0%; Pred. No. 43;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41
|||

Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 77

US-10-372-473-7

Sequence 7, Application US/10372473

Publication No. US2004005691A1

GENERAL INFORMATION:

APPLICANT: Chou, Kuo-Chen

APPLICANT: YON, JEFFREY ROLAND

APPLICANT: HAMILTON, BRUCE JOHN

TITLE OF INVENTION: Modified BACE

FILE REFERENCE: MHB 01-176-A

CURRENT APPLICATION NUMBER: US/10/372,473

CURRENT FILING DATE: 2003-02-21

NUMBER OF SEQ ID NOS: 24

SOFTWARE: PatentIn version 3.2

SEQ ID NO 7

LENGTH: 455

TYPE: PRT

ORGANISM: Homo sapiens

FEATURE:

NAME/KEY: MISC FEATURE

OTHER INFORMATION: Amino acid sequence of recombinant human BACE with P3K mutation

US-10-372-473-7

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 78

US-10-627-473-2

Sequence 2, Application US/10627473

Publication No. US20040096950A1

GENERAL INFORMATION:

APPLICANT: VUILLARD, LAURENT MICHEL MARIE

APPLICANT: PATEL, SAHIL JOE

APPLICANT: YON, JEFFREY ROLAND

APPLICANT: CLEASBY, ANNE

APPLICANT: HAMILTON, BRUCE JOHN

APPLICANT: SHAH, ALEEM

TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME

FILE REFERENCE: 674553-2002.1

CURRENT APPLICATION NUMBER: US/10/627,473

CURRENT FILING DATE: 2003-07-25

PRIOR APPLICATION NUMBER: 60/398,681

PRIOR FILING DATE: 2002-07-26

NUMBER OF SEQ ID NOS: 46

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 2

LENGTH: 455

TYPE: PRT

ORGANISM: Homo sapiens

US-10-627-473-2

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 79

US-10-627-473-6

Sequence 6, Application US/10627473

Publication No. US20040096950A1

GENERAL INFORMATION:

APPLICANT: VUILLARD, LAURENT MICHEL MARIE

APPLICANT: PATEL, SAHIL JOE

APPLICANT: YON, JEFFREY ROLAND

APPLICANT: CLEASBY, ANNE

APPLICANT: HAMILTON, BRUCE JOHN

APPLICANT: SHAH, ALEEM

TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME

FILE REFERENCE: 674553-2002.1

CURRENT APPLICATION NUMBER: US/10/627,473

CURRENT FILING DATE: 2003-07-25

PRIOR APPLICATION NUMBER: 60/398,681

PRIOR FILING DATE: 2002-07-26

NUMBER OF SEQ ID NOS: 46

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 6

LENGTH: 455

TYPE: PRT

ORGANISM: Homo sapiens

US-10-627-473-6

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 80

US-10-627-473-8

Sequence 8, Application US/10627473

Publication No. US20040096950A1

GENERAL INFORMATION:

APPLICANT: VUILLARD, LAURENT MICHEL MARIE

APPLICANT: PATEL, SAHIL JOE

APPLICANT: YON, JEFFREY ROLAND

APPLICANT: CLEASBY, ANNE

APPLICANT: HAMILTON, BRUCE JOHN

APPLICANT: SHAH, ALEEM

TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME

FILE REFERENCE: 674553-2002.1

CURRENT APPLICATION NUMBER: US/10/627,473

CURRENT FILING DATE: 2003-07-25

PRIOR APPLICATION NUMBER: 60/398,681

PRIOR FILING DATE: 2002-07-26

NUMBER OF SEQ ID NOS: 46

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 8

LENGTH: 455

TYPE: PRT

ORGANISM: Homo sapiens

US-10-627-473-8

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 81

US-10-627-473-14

Sequence 14, Application US/10627473

Publication No. US20040096950A1

GENERAL INFORMATION:

APPLICANT: VUILLARD, LAURENT MICHEL MARIE

```

; APPLICANT: PATEL, SAHIL JOB
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 14
; LENGTH: 455
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-627-473-14

Query Match          100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 43;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 82
US-10-281-092-8
; Sequence 8, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Manpin
; APPLICANT: Hong, Lin
; APPLICANT: Koelsch, Gerald E.
; APPLICANT: Loy, Jeffrey A.
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasumadrum, Thippeswamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; FILE REFERENCE: 2932.1001-004
; CURRENT APPLICATION NUMBER: US/10/281,092
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: US 10/032,818
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 456
```

```

; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: deduced amino acid sequence of promemapsin 2-T1
; US-10-281-092-8

Query Match          100.0%; Score 104; DB 1; Length 456;
Best Local Similarity 100.0%; Pred. No. 43;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 83
US-09-794-927-24
; Sequence 24, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-794-927-24

Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      28 TQHGIRLPRLRSGLGAPLGL 47

RESULT 84
US-09-794-927-32
; Sequence 32, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
```

```

; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 T0HGIRLPURSGIGCAPLGL 41
Db      22 T0HGIRLPURSGIGCAPLGL 41
```

```

RESULT 85
US-09-795-847-24
; Sequence 24, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 T0HGIRLPURSGIGCAPLGL 41
Db      22 T0HGIRLPURSGIGCAPLGL 41
```

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RESULT 86
US-09-795-847-32
```

```

; Sequence 32, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 T0HGIRLPURSGIGCAPLGL 41
Db      22 T0HGIRLPURSGIGCAPLGL 41
```

```

RESULT 87
US-09-794-743-24
; Sequence 24, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-24
```


US-09-794-743-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 T0HGIRLPRLRSGLGAPLGL 41
Db 28 T0HGIRLPRLRSGLGAPLGL 47

RESULT 88

US-09-794-743-32

; Sequence 32, Application US/09794743
; Patent No. US20010021391A1

; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC

CURRENT FILING DATE: 2001-02-27

PRIOR FILING DATE: 1999-10-13

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1998-09-24

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 32

TYPE: PRT

LENGTH: 459

ORGANISM: Homo sapiens

US-09-794-743-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 T0HGIRLPRLRSGLGAPLGL 41
Db 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 89
US-09-794-748-24

; Sequence 24, Application US/09794748
; Patent No. US20020037315A1

; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC

CURRENT FILING DATE: 2001-02-27

PRIOR FILING DATE: 1999-10-13

PRIOR FILING DATE: 1999-10-13

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-748-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 T0HGIRLPRLRSGLGAPLGL 41
Db 28 T0HGIRLPRLRSGLGAPLGL 47

RESULT 90

US-09-794-748-32

; Sequence 32, Application US/09794748
; Patent No. US20020037315A1

; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC

CURRENT FILING DATE: 2001-02-27

PRIOR FILING DATE: 1999-10-13

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1998-09-24

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 32

TYPE: PRT

LENGTH: 459

ORGANISM: Homo sapiens

US-09-794-748-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 T0HGIRLPRLRSGLGAPLGL 41
Db 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 91

US-09-794-925-24

; Sequence 24, Application US/09794925
; Patent No. US20020064819A1

; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.

```
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-794-925-24
```

```
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPURSGIGAPLGL 41
DB 28 TQHGIRLPURSGIGAPLGL 47
```

```
RESULT 92
US-09-794-925-32
/ Sequence 32, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-794-925-32
```

```
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY 22 TQHGIRLPURSGIGAPLGL 41
DB 22 TQHGIRLPURSGIGAPLGL 41
```

```
RESULT 93
US-09-681-442-24
/ Sequence 24, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ PRIOR FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-681-442-24
```

```
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPURSGIGAPLGL 41
DB 28 TQHGIRLPURSGIGAPLGL 47
```

```
RESULT 94
US-09-681-442-32
/ Sequence 32, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ PRIOR FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
```

SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 32
LENGTH: 459
TYPE: PRT
ORGANISM: Homo sapiens
US-09-681-442-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 95
US-09-869-414-24
Sequence 24, Application US/09869414
Publication No. US20030077226A1
GENERAL INFORMATION:

APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 24

LENGTH: 459

TYPE: PRT

ORGANISM: Homo sapiens

US-09-869-414-24

Query Match 100.0%; Score 104; DB 1; Length 459;

Best Local Similarity 100.0%; Pred. No. 44;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41

DB 28 TOHGIRLPRLRSGLGAPLGL 47

RESULT 96
US-09-869-414-32
Sequence 32, Application US/09869414
Publication No. US20030077226A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 32
LENGTH: 459
TYPE: PRT
ORGANISM: Homo sapiens
US-09-869-414-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 97
US-09-548-366-24

Sequence 24, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
FILE REFERENCE: 28341/6280A

CURRENT APPLICATION NUMBER: US/09/548,366

CURRENT FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 65

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 24

LENGTH: 459

TYPE: PRT

ORGANISM: Homo sapiens

US-09-548-366-24

Query Match 100.0%; Score 104; DB 1; Length 459;

Best Local Similarity 100.0%; Pred. No. 44;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41

DB 28 TOHGIRLPRLRSGLGAPLGL 47

RESULT 98
US-09-548-366-32
Sequence 32, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366

```
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-366-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 99
US-10-372-473-24
/ Sequence 24, Application US/10372473
/ Publication No. US20040005691A1
/ GENERAL INFORMATION:
/ APPLICANT: Chou, Kuo-Chen
/ APPLICANT: Howe, W. Jeffery
/ TITLE OF INVENTION: Modified BACE
/ FILE REFERENCE: MBHB 01-1766-A
/ CURRENT APPLICATION NUMBER: US/10/372,473
/ CURRENT FILING DATE: 2003-02-21
/ NUMBER OF SEQ ID NOS: 24
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: MISC_FEATURE
/ OTHER INFORMATION: Human recombinant BACE with 6-His tags.
US-10-372-473-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 100
US-10-652-927-24
/ Sequence 24, Application US/10652927
/ Publication No. US20040043408A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N3
/ CURRENT APPLICATION NUMBER: US/10/652,927
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
```

```
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-927-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 28 TQHGIRLPRLRSGLGAPLGL 47
```

```
RESULT 101
US-10-652-927-32
/ Sequence 32, Application US/10652927
/ Publication No. US20040043408A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N3
/ CURRENT APPLICATION NUMBER: US/10/652,927
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-927-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 102
US-10-652-830-24
/ Sequence 24, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
```

```
;; CURRENT APPLICATION NUMBER: US/10/652,830
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 24
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-830-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TOHGIRLPKRSGLGAPLGL 41
Db      28 TOHGIRLPKRSGLGAPLGL 47
```

```
RESULT 103
US-10-652-830-32
;; Sequence 32, Application US/10652830
;; Publication No. US20040048303A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N1
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 32
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-830-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TOHGIRLPKRSGLGAPLGL 41
Db      22 TOHGIRLPKRSGLGAPLGL 41
```

```
RESULT 104
US-10-652-045-24
```

```
;; Sequence 24, Application US/10652045
;; Publication No. US20040166507A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N2
;; CURRENT APPLICATION NUMBER: US/10/652,045
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 24
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-045-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TOHGIRLPKRSGLGAPLGL 41
Db      28 TOHGIRLPKRSGLGAPLGL 47
```

```
RESULT 105
US-10-652-045-32
;; Sequence 32, Application US/10652045
;; Publication No. US20040166507A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N2
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 32
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-045-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

OY 22 TQHGIRLPLRSGIGGAPLGL 41
|||
Db 22 TQHGIRLPLRSGIGGAPLGL 41

RESULT 106
US-10-476-935-24
; Sequence 24, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-476-935-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPLRSGIGGAPLGL 41
|||
Db 28 TQHGIRLPLRSGIGGAPLGL 47

RESULT 107
US-10-476-935-32
; Sequence 32, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-476-935-32

Query Match 100.0%; Score 104; DB 1; Length 459;

Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 22 TQHGIRLPLRSGIGGAPLGL 41
|||
Db 22 TQHGIRLPLRSGIGGAPLGL 41

RESULT 108
US-10-940-867-24
; Sequence 24, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-940-867-24

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPLRSGIGGAPLGL 41
|||
Db 28 TQHGIRLPLRSGIGGAPLGL 47

RESULT 109
US-10-940-867-32
; Sequence 32, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-940-867-32

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;

	Matches	20; Conservative	0; Mismatches	0; Indels	Gaps	0;
Qy	22 TQHGIRLPLRSGLGAPIGL	41				
Db	22 TQHGIRLPLRSGLGAPIGL	41				

```

RESULT 110
US-10-477-076-24
; Sequence 24, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
APPLICANT: Beikowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIORITY APPLICATION NUMBER: 09/416,901
PRIORITY FILING DATE: 1999-10-13
PRIORITY APPLICATION NUMBER: 60/155,493
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 60/101,594
PRIORITY FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-477-076-24

```

RESULT 111
 US-10-477-076-32
 ; Sequence 32, Application US/10477076
 ; Publication No. US20050080232A1
 ; GENERAL INFORMATION:
 APPLICANT: Beikowski et al.
 TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
 TITLE OF INVENTION: THEREFOR
 FILE REFERENCE: 28341/6280M2
 CURRENT APPLICATION NUMBER: US/10/477,076
 CURRENT FILING DATE: 2003-11-06
 PRIOR APPLICATION NUMBER: 09/416,901
 PRIOR FILING DATE: 1999-10-13
 PRIOR APPLICATION NUMBER: 60/155,493
 PRIOR FILING DATE: 1999-09-23
 PRIOR APPLICATION NUMBER: 09/404,133
 PRIOR FILING DATE: 1999-09-23
 PRIOR APPLICATION NUMBER: PCT/US99/20881
 PRIOR FILING DATE: 1999-09-23
 PRIOR APPLICATION NUMBER: 60/101,594
 PRIOR FILING DATE: 1998-09-24
 NUMBER OF SEQ ID NOS: 73
 ; SOFTWARE: PatentIn Ver. 2.0
 ; SEQ ID NO 32
 ; LENGTH: 459
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-477-076-32

Query Match	100.0%	Score 104	DB 1	Length 459
Best Local Similarity	100.0%	Pred. No. 44		
Matches	20	Conservative	0	Mismatches
			0	Indels
			0	Gaps
QY	22	TQHGIRLPKRSGLGAPGL	41	
Db	22	TQHGIRLPKRSGLGAPGL	41	

```

RESULT 112
US-10-627-473-18
; Sequence 18, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; TITLE OF INVENTION: (BACE) AND METHODS OF USE THEREOF
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 18
; LENGTH: 460
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-18

```

```

RESULT 113
US-10-627-473-4
; Sequence 4, Application US/106227473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; TITLE OF INVENTION: (BACS) AND METHODS OF USE THEREOF
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,661
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-4

Query Match          100.0%; Score 104; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 44;

```

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
Db 24 TONGIRLPLRSGLGAPLGL 43

RESULT 114
US-10-627-473-12
; Sequence 12, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILIARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-12

Query Match 100.0%; Score 104; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
Db 24 TONGIRLPLRSGLGAPLGL 43

RESULT 115
US-10-627-473-16
; Sequence 16, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILIARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-16

Query Match 100.0%; Score 104; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41

Db 24 TONGIRLPLRSGLGAPLGL 43

RESULT 116
US-09-794-927-6
; Sequence 6, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Blenkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Rigdang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USBS
; FILE REFERENCE: 28341/6280FG
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 117
US-09-795-847-6
; Sequence 6, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Blenkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Rigdang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USBS
; FILE REFERENCE: 28341/6280FG
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO: 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-795-847-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 118
US-09-794-743-6
Sequence 6, Application US/09794743
Patent No. US20010021391A1

GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO: 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-743-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 119
US-09-794-748-6
Sequence 6, Application US/09794748
Patent No. US20020037315A1

GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280JL
CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO: 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-748-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 120
US-09-794-925-6
Sequence 6, Application US/09794925
Patent No. US20020064819A1

GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280HI
CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO: 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-09-794-925-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 121

```
US-09-681-442-6
; Sequence 6, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 122
US-09-908-943A-4
; Sequence 4, Application US/09908943A
; Publication No. US20030017991A1
; GENERAL INFORMATION:
; APPLICANT: Yan, Riqiang
; APPLICANT: Tomasselli, Alfredo G.
; APPLICANT: Gurney, Mark E.
; APPLICANT: Emons, Thomas L.
; APPLICANT: Bienkowski, Mike J.
; APPLICANT: Heinrichson, Robert L.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281A.US1
; CURRENT APPLICATION NUMBER: US/09/908,943A
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-908-943A-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
RESULT 123
US-09-869-414-6
; Sequence 6, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280W
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 124
US-09-548-366-6
; Sequence 6, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
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Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 125

US-10-652-927-6

; Sequence 6, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:

; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280N3
; CURRENT FILING DATE: 2003-08-29

; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT

; ORGANISM: Homo sapiens
US-10-652-927-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 126

US-10-652-830-6

; Sequence 6, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:

; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280N1
; CURRENT FILING DATE: 2003-08-29

; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 6

; LENGTH: 476
; TYPE: PRT

; ORGANISM: Homo sapiens
US-10-652-830-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 127

US-10-652-045-6

; Sequence 6, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:

; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280N2
; CURRENT FILING DATE: 2003-08-29

; PRIOR APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT

; ORGANISM: Homo sapiens
US-10-652-045-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 128

US-10-476-935-6

; Sequence 6, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:

; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

; FILE REFERENCE: 28341/6280N1
; CURRENT FILING DATE: 2003-11-06

; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23

```
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-476-935-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 129
US-10-801-487-4
; Sequence 4, Application US/10801487
; Publication No. US20040241792A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281F
; CURRENT APPLICATION NUMBER: US/10/801,487
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-487-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 130
US-10-801-938-4
; Sequence 4, Application US/10801938
; Publication No. US20040253706A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281D
; CURRENT APPLICATION NUMBER: US/10/801,938
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-938-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
```

```
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 131
US-10-801-509-4
; Sequence 4, Application US/10801509
; Publication No. US20040254341A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281C
; CURRENT APPLICATION NUMBER: US/10/801,509
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-509-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 132
US-10-801-486-4
; Sequence 4, Application US/10801486
; Publication No. US20040254342A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281B
; CURRENT APPLICATION NUMBER: US/10/801,486
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-486-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 133
US-10-940-867-6
; Sequence 6, Application US/10940867
```

Publication No. US20050026256A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.PCPA
CURRENT APPLICATION NUMBER: US/10/940,867
CURRENT FILING DATE: 2004-09-14
PRIOR APPLICATION NUMBER: US 09/806,194
PRIOR FILING DATE: 2001-03-26
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-10-940-867-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 134
US-10-477-076-6
Sequence 6, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Beinowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 6
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-10-477-076-6

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 135
US-10-801-493-4

Sequence 4, Application US/10801493
Publication No. US20050096457A1
GENERAL INFORMATION:
APPLICANT: Yan et al.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281E
CURRENT APPLICATION NUMBER: US/10/801,493
CURRENT FILING DATE: 2004-03-16
PRIOR APPLICATION NUMBER: 09/908,943
PRIOR FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 4
LENGTH: 476
TYPE: PRT
ORGANISM: Homo sapiens
US-10-801-493-4

Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 136
US-09-796-264-2
Sequence 2, Application US/09796264
Patent No. US20020049303A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Lin, Xinli
APPLICANT: Koelsch, Gerald
TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
FILE REFERENCE: OMRF 179
CURRENT APPLICATION NUMBER: US/09/796,264
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/604,608
PRIOR FILING DATE: 2000-06-27
PRIOR APPLICATION NUMBER: 60/168,060
PRIOR FILING DATE: 1999-11-30
PRIOR APPLICATION NUMBER: 60/177,836
PRIOR FILING DATE: 2000-01-25
PRIOR APPLICATION NUMBER: 60/178,368
PRIOR FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: 60/210,292
PRIOR FILING DATE: 2000-06-08
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 488
TYPE: PRT
ORGANISM: Homo sapiens

FEATURE:
OTHER INFORMATION: Purified Memapsin 2
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide
OTHER INFORMATION: residues
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2
OTHER INFORMATION: Inhibitor
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and
OTHER INFORMATION: 220-224 are N-lobe Beta Strands
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,

OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,
OTHER INFORMATION: and 427-431 are C-lobe Helices
US-09-796-264-2

Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 49;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGAGAPLGL 41
Db 9 TQHGIRLPRLSGAGAPLGL 28

RESULT 137
US-09-845-226-2
Sequence 2, Application US/09845226
Patent No. US20020115600A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Hong, Lin
APPLICANT: Ghosh, Arun K.
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
FILE REFERENCE: OMRF 182
CURRENT APPLICATION NUMBER: US/09/845,226
CURRENT FILING DATE: 2001-04-30
PRIOR APPLICATION NUMBER: 09/603,713
PRIOR FILING DATE: 2000-06-27
PRIOR APPLICATION NUMBER: 60/168,060
PRIOR FILING DATE: 1999-11-30
PRIOR APPLICATION NUMBER: 60/177,836
PRIOR FILING DATE: 2000-01-25
PRIOR APPLICATION NUMBER: 60/178,368
PRIOR FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: 60/210,292
PRIOR FILING DATE: 2000-06-08
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 488
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: Purified Memapsin 2
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide
OTHER INFORMATION: residues
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2
OTHER INFORMATION: Inhibitor
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and
OTHER INFORMATION: 220-224 are N-lobe Beta Strands
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,
OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,
OTHER INFORMATION: and 427-431 are C-lobe Helices
US-09-845-226-2

Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 49;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGAGAPLGL 41
Db 9 TQHGIRLPRLSGAGAPLGL 28

RESULT 138
US-09-795-903A-2

Sequence 2, Application US/09795903A
Patent No. US20020164760A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Lin, Xini
APPLICANT: Koelsch, Gerald
TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
TITLE OF INVENTION: of Use Thereof
FILE REFERENCE: OMRF 179
CURRENT APPLICATION NUMBER: US/09/795,903A
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/604,608
PRIOR FILING DATE: 2000-06-27
PRIOR APPLICATION NUMBER: 60/168,060
PRIOR FILING DATE: 1999-11-30
PRIOR APPLICATION NUMBER: 60/177,836
PRIOR FILING DATE: 2000-01-25
PRIOR APPLICATION NUMBER: 60/178,368
PRIOR FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: 60/210,292
PRIOR FILING DATE: 2000-06-08
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 488
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: Purified Memapsin 2
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide
OTHER INFORMATION: residues
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2
OTHER INFORMATION: Inhibitor
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and
OTHER INFORMATION: 220-224 are N-lobe Beta Strands
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,
OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,
OTHER INFORMATION: and 427-431 are C-lobe Helices
US-09-795-903A-2

Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 49;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGAGAPLGL 41
Db 9 TQHGIRLPRLSGAGAPLGL 28

RESULT 139
US-10-032-818-2
Sequence 2, Application US/10032818
Publication No. US20030092629A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Koelsch, Gerald
APPLICANT: Ghosh, Arun K.
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
FILE REFERENCE: 2932.1006-007
CURRENT APPLICATION NUMBER: US/10/032,818
CURRENT FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: US 60/275,756
PRIOR FILING DATE: 2001-03-14
PRIOR APPLICATION NUMBER: US 60/258,705
PRIOR FILING DATE: 2000-12-28
NUMBER OF SEQ ID NOS: 83

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 2
LENGTH: 488
TYPE: PRT
ORGANISM: Homo sapiens
US-10-032-818-2

Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 49;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41
Db 9 TONGIRLPRLRSGLGAPLGL 28

RESULT 140
US-10-820-953-2
Sequence 2, Application US/10820953
Publication No. US20040167075A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Ghosh, Arun K.
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
FILE REFERENCE: OMRF 182
CURRENT FILING DATE: 2004-04-08
PRIOR FILING DATE: US/09/603, 713
PRIOR APPLICATION NUMBER: US/09/603, 713
PRIOR FILING DATE: 2000-06-27
PRIOR APPLICATION NUMBER: 60/141,363
PRIOR FILING DATE: 1999-06-28
PRIOR APPLICATION NUMBER: 60/168,060
PRIOR FILING DATE: 1999-11-30
PRIOR APPLICATION NUMBER: 60/177,836
PRIOR FILING DATE: 2000-01-25
PRIOR APPLICATION NUMBER: 60/178,368
PRIOR FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: 60/210,292
PRIOR FILING DATE: 2000-06-08
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 488
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: Purified Memapsin 2
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide
OTHER INFORMATION: residues
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2
OTHER INFORMATION: inhibitor
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and
OTHER INFORMATION: 220-224 are N-Iobe Beta Strands
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-Iobe Helices
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,
OTHER INFORMATION: 400-405, and 418-420 are C-Iobe Beta Strands
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,
OTHER INFORMATION: and 427-431 are C-Iobe Helices
US-10-820-953-2

Query Match 100.0%; Score 104; DB 1; Length 488;

Best Local Similarity 100.0%; Pred. No. 49;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41
Db 9 TONGIRLPRLRSGLGAPLGL 28

RESULT 141
US-10-773-754-2

Sequence 2, Application US/10773754
Publication No. US20040220079A1
GENERAL INFORMATION:

APPLICANT: Koelsch, Gerald
APPLICANT: Tang, Jordan J. N.
APPLICANT: Ghosh, Arun K.

APPLICANT: The Board of Trustees of the University of Illinois

APPLICANT: Oklahoma Medical Research Foundation
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof

FILE REFERENCE: 022266-000930US

CURRENT APPLICATION NUMBER: US/10/773,754

CURRENT FILING DATE: 2004-02-06

PRIOR APPLICATION NUMBER: US 60/141,363

PRIOR FILING DATE: 1999-06-28

PRIOR APPLICATION NUMBER: US 60/168,060

PRIOR FILING DATE: 1999-11-30

PRIOR APPLICATION NUMBER: US 60/177,836

PRIOR FILING DATE: 2000-01-25

PRIOR APPLICATION NUMBER: US 60/178,368

PRIOR FILING DATE: 2000-01-27

PRIOR APPLICATION NUMBER: US 60/210,292

PRIOR FILING DATE: 2000-06-08

PRIOR APPLICATION NUMBER: US 09/603, 713

PRIOR FILING DATE: 2000-06-27

PRIOR APPLICATION NUMBER: US 09/845,226

PRIOR FILING DATE: 2001-04-30

NUMBER OF SEQ ID NOS: 39

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 2

LENGTH: 488

TYPE: PRT

ORGANISM: Homo sapiens

FEATURE:

OTHER INFORMATION: purified memapsin 2, aspartic proteinase 2 (ASP2)

OTHER INFORMATION: amino acids 28-48 are remnant putative propeptide

OTHER INFORMATION: residues

OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and
OTHER INFORMATION: 220-224 are N-Iobe beta strands
OTHER INFORMATION: Amino acids 184-191 and 210-217 are N-Iobe helices
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,
OTHER INFORMATION: 400-405, and 418-420 are C-Iobe beta strands
OTHER INFORMATION: Amino acids 286-299, 307-310, 350-353, 384-387,
OTHER INFORMATION: and 427-431 are C-Iobe helices
US-10-773-754-2

Query Match 100.0%; Score 104; DB 1; Length 488;

Best Local Similarity 100.0%; Pred. No. 49;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41
Db 9 TONGIRLPRLRSGLGAPLGL 28

RESULT 142

```
US-09-794-927-4
; Sequence 4, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-4

Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 143
US-09-795-847-4
; Sequence 4, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DB
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
```

```
; ORGANISM: Homo sapiens
US-09-795-847-4

Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 144
US-09-794-743-4
; Sequence 4, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-4

Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 145
US-09-794-748-4
; Sequence 4, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280UL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
```



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; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-748-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPLRSGLGAPLGL 41
        |||||||
Db      22 TQHGIRLPLRSGLGAPLGL 41

RESULT 146
US-09-794-925-4
; Sequence 4, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPLRSGLGAPLGL 41
        |||||||
Db      22 TQHGIRLPLRSGLGAPLGL 41

RESULT 147
US-09-681-442-4
; Sequence 4, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
```

```

; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPLRSGLGAPLGL 41
        |||||||
Db      22 TQHGIRLPLRSGLGAPLGL 41

RESULT 148
US-09-908-943A-2
; Sequence 2, Application US/09908943A
; Publication No. US20030017991A1
; GENERAL INFORMATION:
; APPLICANT: Yan, Riqiang
; APPLICANT: Tomaselli, Alfredo G.
; APPLICANT: Gurney, Mark E.
; APPLICANT: Emmons, Thomas L.
; APPLICANT: Bienkowski, Mike J.
; APPLICANT: Heinrichson, Robert L.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281A-US1
; CURRENT APPLICATION NUMBER: US/09/908,943A
; CURRENT FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-908-943A-2

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPLRSGLGAPLGL 41
        |||||||
Db      22 TQHGIRLPLRSGLGAPLGL 41

RESULT 149
US-09-969-671A-2
; Sequence 2, Application US/09969671A
```

```
; Publication No. US20030036112A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP2
; FILE REFERENCE: GH-70368-D1
; CURRENT APPLICATION NUMBER: US/09/969,671A
; CURRENT FILING DATE: 2001-10-03
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; PRIOR APPLICATION NUMBER: 09/694,200
; PRIOR FILING DATE: 2000-10-23
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-969-671A-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 150
US-09-869-414-4
; Sequence 4, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Belkowskí et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-869-414-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 151
US-09-548-366-4
```

```
; Sequence 4, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-548-366-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 152
US-10-032-818-4
; Sequence 4, Application US/10032818
; Publication No. US20030092629A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Koelsch, Gerald
; APPLICANT: Ghosh, Arun K.
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: 2932.1006-007
; CURRENT APPLICATION NUMBER: US/10/032,818
; CURRENT FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; NUMBER OF SEQ ID NOS: 83
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapien
; US-10-032-818-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 153
US-10-214-932-104
```

```
; Sequence 104, Application US/10214932
; Publication No. US20030100707A1
; GENERAL INFORMATION:
; APPLICANT: KWANG, Inhan
; APPLICANT: KIM, Dae Heon
; APPLICANT: LEE, Yong Jik
; TITLE OF INVENTION: SYSTEM FOR DETECTING PROTEASE
; FILE REFERENCE: APB02/US
; CURRENT APPLICATION NUMBER: US/10/214,932
; CURRENT FILING DATE: 2002-08-08
; NUMBER OF SEQ ID NOS: 133
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 104
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-214-932-104

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 154
US-10-308-365-2
; Sequence 2, Application US/10308365
; Publication No. US20030109022A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MORPHY, KAT
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/308,365
; CURRENT FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1996-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: HOMO SAPIENS
; US-10-308-365-2

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 155
US-10-372-730-9
; Sequence 9, Application US/10372730
; Publication No. US20030167486A1
; GENERAL INFORMATION:
; APPLICANT: Jacobsen, Helmut
; APPLICANT: Mosbach-Ozmen, Laurence
; APPLICANT: Neillboeck-Hochstetter, Peter
; TITLE OF INVENTION: Double transgenic animal model for Alzheimer's Disease
; FILE REFERENCE: Case 21132
```

```
; CURRENT APPLICATION NUMBER: US/10/372,730
; CURRENT FILING DATE: 2003-02-24
; PRIOR APPLICATION NUMBER: EP02004331.1
; PRIOR FILING DATE: 2002-03-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 9
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-372-730-9

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 156
US-10-372-473-1
; Sequence 1, Application US/10372473
; Publication No. US20040005691A1
; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; APPLICANT: Howe, W. Jeffery
; TITLE OF INVENTION: Modified-BACE
; FILE REFERENCE: MBHB 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; CURRENT FILING DATE: 2003-02-21
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MISC FEATURE
; OTHER INFORMATION: Amino acid sequence of human BACE.
; US-10-372-473-1

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 157
US-10-652-927-4
; Sequence 4, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
```

```
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 4
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-927-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41
Db 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 158
US-10-652-830-4
/ Sequence 4, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
/ CURRENT APPLICATION NUMBER: US/10/652,830
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 4
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-830-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41
Db 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 159
US-10-281-092-6
/ Sequence 6, Application US/10281092
/ Publication No. US20040121947A1
/ GENERAL INFORMATION:
/ APPLICANT: Ghosh, Arun K.
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Bilcer, Geoffrey
/ APPLICANT: Chang, Wanpin
/ APPLICANT: Hong, Lin
/ APPLICANT: Koelsch, Gerald E.
/ APPLICANT: Loy, Jeffrey A.
/ APPLICANT: Turner, Robert T., III
/ APPLICANT: Devasumadrum, Thippeswamy
```

```
/ TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
/ FILE REFERENCE: 2932.1001-004
/ CURRENT APPLICATION NUMBER: US/10/281,092
/ CURRENT FILING DATE: 2002-10-23
/ PRIOR APPLICATION NUMBER: US 10/032,818
/ PRIOR FILING DATE: 2001-12-28
/ PRIOR APPLICATION NUMBER: PCT US01/50826
/ PRIOR FILING DATE: 2001-12-28
/ PRIOR APPLICATION NUMBER: US 60/258,705
/ PRIOR FILING DATE: 2000-12-28
/ PRIOR APPLICATION NUMBER: US 60/275,756
/ PRIOR FILING DATE: 2001-03-14
/ PRIOR APPLICATION NUMBER: US 60/335,952
/ PRIOR FILING DATE: 2001-10-23
/ PRIOR APPLICATION NUMBER: US 60/333,545
/ PRIOR FILING DATE: 2001-11-27
/ PRIOR APPLICATION NUMBER: US 60/348,464
/ PRIOR FILING DATE: 2002-01-14
/ PRIOR APPLICATION NUMBER: US 60/348,615
/ PRIOR FILING DATE: 2002-01-14
/ PRIOR APPLICATION NUMBER: US 60/390,804
/ PRIOR FILING DATE: 2002-06-20
/ PRIOR APPLICATION NUMBER: US 60/397,557
/ Remaining Prior Application data removed - See File Wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 59
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 6
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Unknown
/ FEATURE:
/ OTHER INFORMATION: deduced amino acid sequence of memapsin 2
US-10-281-092-6

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41
Db 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 160
US-10-466-258-2
/ Sequence 2, Application US/10466258
/ Publication No. US20040132096A1
/ GENERAL INFORMATION:
/ APPLICANT: GLAXO GROUP LIMITED
/ TITLE OF INVENTION: ASSAY
/ FILE REFERENCE: P80966 GCW
/ CURRENT APPLICATION NUMBER: US/10/466,258
/ CURRENT FILING DATE: 2003-07-15
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: Patentln version 3.0
/ SEQ ID NO 2
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-466-258-2

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41
Db 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 161
```

US-10-223-837-1
; Sequence 1, Application US/10223837
; Publication No. US20040154049A1
; GENERAL INFORMATION:
; APPLICANT: Martin Geppert
; APPLICANT: James Harper
; APPLICANT: Max Harrison
; APPLICANT: Hayon Prosser
; TITLE OF INVENTION: COMPOUNDS
; FILE REFERENCE: PG4564US
; CURRENT APPLICATION NUMBER: US/10/223.837
; CURRENT FILING DATE: 2002-08-20
; PRIOR APPLICATION NUMBER: GB0120342.1
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: GB0126732.6
; PRIOR FILING DATE: 2001-11-11
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 501
; TYPE: PRT
; ORGANISM: homo sapien
US-10-223-837-1

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41
|||
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 162
US-10-652-045-4
; Sequence 4, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652.045
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-045-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41
|||
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 163
US-10-343-389A-19
; Sequence 19, Application US/10343389A
; Publication No. US20040180417A1
; GENERAL INFORMATION:
; APPLICANT: SEIDAH, NABIL G.
; APPLICANT: CHRISTEN, MICHEL
; APPLICANT: CROMLISH, JAMES A.
; TITLE OF INVENTION: SECRETASE/SHEPDASE WITH ASP-ASE ACTIVITY ON THE
; FILE REFERENCE: GOOD:027US
; CURRENT APPLICATION NUMBER: US/10/343.389A
; CURRENT FILING DATE: 2003-01-30
; NUMBER OF SEQ ID NOS: 28
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 19
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-10-343-389A-19

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41
|||
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 164
US-10-476-935-4
; Sequence 4, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476.935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-476-935-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41
|||
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 165
US-10-801-487-2

```
/ Sequence 2, Application US/10801487
/ Publication No. US20040241792A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281P
/ CURRENT APPLICATION NUMBER: US/10/801,487
/ CURRENT FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 2
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-801-487-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy 22 TOHGIRLPLRSGIGCAPLGL 41
Db 22 TOHGIRLPLRSGIGCAPLGL 41
```

```
RESULT 166
US-10-723-860-285
/ Sequence 285, Application US/10723860
/ Publication No. US20040253606A1
/ GENERAL INFORMATION:
/ APPLICANT: Aziz, Naresha
/ APPLICANT: Ginsburg, Wendy M.
/ APPLICANT: Zlocznik, Albert
/ TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions &
/ FILE REFERENCE: 05882.0193.NPUS01
/ CURRENT APPLICATION NUMBER: US/10/723,860
/ CURRENT FILING DATE: 2003-11-26
/ PRIOR APPLICATION NUMBER: 60/429,739
/ PRIOR FILING DATE: 2002-11-26
/ NUMBER OF SEQ ID NOS: 8393
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 285
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-723-860-285
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy 22 TOHGIRLPLRSGIGCAPLGL 41
Db 22 TOHGIRLPLRSGIGCAPLGL 41
```

```
RESULT 167
US-10-801-938-2
/ Sequence 2, Application US/10801938
/ Publication No. US20040253706A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281D
/ CURRENT APPLICATION NUMBER: US/10/801,938
/ CURRENT FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
```

```
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 2
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-801-938-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy 22 TOHGIRLPLRSGIGCAPLGL 41
Db 22 TOHGIRLPLRSGIGCAPLGL 41
```

```
RESULT 168
US-10-801-509-2
/ Sequence 2, Application US/10801509
/ Publication No. US20040254341A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281C
/ CURRENT APPLICATION NUMBER: US/10/801,509
/ CURRENT FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 2
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-801-509-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy 22 TOHGIRLPLRSGIGCAPLGL 41
Db 22 TOHGIRLPLRSGIGCAPLGL 41
```

```
RESULT 169
US-10-801-486-2
/ Sequence 2, Application US/10801486
/ Publication No. US20040254342A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281B
/ CURRENT APPLICATION NUMBER: US/10/801,486
/ CURRENT FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 2
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-801-486-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
```

Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 170

US-10-837-021A-1
; Sequence 1, Application US/10837021A
; Publication No. US20040265965A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P
; APPLICANT: McConlogue, Lisa
; APPLICANT: Baal, Guribdal
; APPLICANT: Sinha, Sukarno
; TITLE OF INVENTION: Glycosylation Variants of BACE
; FILE REFERENCE: MBH-03-268-A
; CURRENT APPLICATION NUMBER: US/10/837,021A
; CURRENT FILING DATE: 2004-04-30
; PRIOR APPLICATION NUMBER: 60/467,509
; PRIOR FILING DATE: 2003-05-02
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 1
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MISC FEATURE
; OTHER INFORMATION: Amino acid sequence of human wildtype BACE
US-10-837-021A-1

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 171

US-10-940-867-4
; Sequence 4, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heimriksson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-940-867-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 172

US-10-726-967A-1
; Sequence 1, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Ballinger, Marcus
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Full length human BACE1 isoform A
US-10-726-967A-1

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 173

US-10-477-076-4
; Sequence 4, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-477-076-4

Query Match 100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41
|||||
Db 22 T0HGIRLPLRSGLGAPLGL 41

```
RESULT 174
US-10-801-493-2
; Sequence 2, Application US/10801493
; Publication No. US20050096457A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281E
; CURRENT APPLICATION NUMBER: US/10/801,493
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-493-2
```

```
Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPLRSGLGAPLGL 41
DB      22 TOHGIRLPLRSGLGAPLGL 41
```

```
RESULT 175
US-10-829-717-2
; Sequence 2, Application US/10829717
; Publication No. US20050101556A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/829,717
; CURRENT FILING DATE: 2004-04-22
; PRIOR APPLICATION NUMBER: US/10/308,365
; PRIOR FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-829-717-2
```

```
Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPLRSGLGAPLGL 41
DB      22 TOHGIRLPLRSGLGAPLGL 41
```

```
RESULT 176
US-10-466-391A-2
; Sequence 2, Application US/10466391A
```

```
; Publication No. US20040146953A1
; GENERAL INFORMATION:
; APPLICANT: GLAXO GROUP LIMITED
; TITLE OF INVENTION: ASSAY
; FILE REFERENCE: P80965 GCM
; CURRENT APPLICATION NUMBER: US/10/466,391A
; CURRENT FILING DATE: 2003-07-15
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-466-391A-2
```

```
Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPLRSGLGAPLGL 41
DB      22 TOHGIRLPLRSGLGAPLGL 41
```

```
RESULT 177
US-09-796-264-3
; Sequence 3, Application US/09796264
; Patent No. US20020049303A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Lin, Xinli
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: OMRF 179
; CURRENT APPLICATION NUMBER: US/09/796,264
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/604,608
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: Pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
US-09-796-264-3
```

```
Query Match      100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPLRSGLGAPLGL 41
DB      24 TOHGIRLPLRSGLGAPLGL 43
```

```
RESULT 178
US-09-845-226-3
```



```
; Sequence 3, Application US/09845226
; Patent No. US20020115600A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Hong, Lin
; APPLICANT: Ghosh, Arun K.
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: OMRF 182
; CURRENT APPLICATION NUMBER: US/09/845,226
; CURRENT FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: 09/603,713
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: Pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
; US-09-845-226-3

Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
         |||||||
Db       24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 179
US-09-795-903A-3
; Sequence 3, Application US/09795903A
; Patent No. US2002016760A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Koelsch, Gerald
; APPLICANT: Lin, Xinli
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: OMRF 179
; CURRENT APPLICATION NUMBER: US/09/795,903A
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/604,608
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
```

```
; FEATURE:
; OTHER INFORMATION: Pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
; US-09-795-903A-3

Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
         |||||||
Db       24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 180
US-10-032-818-3
; Sequence 3, Application US/10032818
; Publication No. US20030092629A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Koelsch, Gerald
; APPLICANT: Ghosh, Arun K.
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: 2932.1006-007
; CURRENT APPLICATION NUMBER: US/10/032,818
; CURRENT FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; NUMBER OF SEQ ID NOS: 83
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-032-818-3

Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
         |||||||
Db       24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 181
US-10-820-953-3
; Sequence 3, Application US/10820953
; Publication No. US20040167075A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Hong, Lin
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: OMRF 182
; CURRENT APPLICATION NUMBER: US/10/820,953
; CURRENT FILING DATE: 2004-04-08
; PRIOR APPLICATION NUMBER: US/09/603,713
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/141,363
; PRIOR FILING DATE: 1999-06-28
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
```

```

; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
US-10-820-953-3

Query Match      100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPRLRSGIGGAPLGL 41
Db      24 TOHGIRLPRLRSGIGGAPLGL 43

RESULT 182
US-10-773-754-3
; Sequence 3, Application US/10773754
; Publication No. US20040220079A1
; GENERAL INFORMATION:
; APPLICANT: Koelisch, Gerald
; APPLICANT: Tang, Jordan J. N.
; APPLICANT: Hong, Lin
; APPLICANT: Ghosh, Arun K.
; APPLICANT: The Board of Trustees of the University of Illinois
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: 022266-000930US
; CURRENT FILING DATE: 2004-02-06
; PRIOR APPLICATION NUMBER: US/10/773,754
; PRIOR FILING DATE: 1999-06-28
; PRIOR APPLICATION NUMBER: US 60/141,363
; PRIOR FILING DATE: 1999-06-28
; PRIOR APPLICATION NUMBER: US 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: US 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: US 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: US 60/210,292
; PRIOR FILING DATE: 2000-06-08
; PRIOR APPLICATION NUMBER: US 09/603,713
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: US 09/845,226
; PRIOR FILING DATE: 2001-04-30
; NUMBER OF SEQ ID NOS: 39
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: pro-memapsin 2
; OTHER INFORMATION:
; FEATURE:
; OTHER INFORMATION: amino acids 1-13 are the T7 promoter
; OTHER INFORMATION: amino acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino acids 16-64 are a putative pro-peptide
; OTHER INFORMATION: amino acids 16-456 are pro-memapsin 2 T1
; FEATURE:
; OTHER INFORMATION: amino acids 16-421 are promemapsin 2 T2
```

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US-10-773-754-3

Query Match      100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPRLRSGIGGAPLGL 41
Db      24 TOHGIRLPRLRSGIGGAPLGL 43

RESULT 183
US-10-275-339A-7
; Sequence 7, Application US/10275339A
; Publication No. US20040110743A1
; GENERAL INFORMATION:
; APPLICANT: MIYAMOTO, Masasumi
; APPLICANT: MATSUI, Junji
; APPLICANT: FUKUMOTO, Hiroaki
; APPLICANT: TAKUI, Naoki
; TITLE OF INVENTION: Beta Secretase Inhibitors
; FILE REFERENCE: 2729 USOP
; CURRENT APPLICATION NUMBER: US/10/275,339A
; CURRENT FILING DATE: 2003-10-30
; PRIOR APPLICATION NUMBER: PCT/JP01/04144
; PRIOR FILING DATE: 2001-05-18
; PRIOR APPLICATION NUMBER: JP 2000-152758
; PRIOR FILING DATE: 2000-05-19
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 7
; LENGTH: 509
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-275-339A-7

Query Match      100.0%; Score 104; DB 1; Length 509;
Best Local Similarity 100.0%; Pred. No. 53;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPRLRSGIGGAPLGL 41
Db      22 TOHGIRLPRLRSGIGGAPLGL 41

RESULT 184
US-09-794-927-8
; Sequence 8, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
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SEQ ID NO 8
LENGTH: 501
TYPE: PRT
ORGANISM: Mus musculus
US-09-794-927-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLSGLAGPPLGL 41
| ||||| |||||
Db 22 THLGIRLPRLSGLAGPPLGL 41

RESULT 185
US-09-795-847-8
Sequence 8, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280DB

CURRENT APPLICATION NUMBER: US/09/795,847

PRIOR FILING DATE: 2001-02-28

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: Patentln Ver. 2.0

SEQ ID NO 8

LENGTH: 501

TYPE: PRT

ORGANISM: Mus musculus

US-09-795-847-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLSGLAGPPLGL 41
| ||||| |||||
Db 22 THLGIRLPRLSGLAGPPLGL 41

RESULT 186
US-09-794-743-8
Sequence 8, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES

FILE REFERENCE: 28341/6280BC

CURRENT APPLICATION NUMBER: US/09/794,743

CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentln Ver. 2.0
SEQ ID NO 8
LENGTH: 501
TYPE: PRT
ORGANISM: Mus musculus
US-09-794-743-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLSGLAGPPLGL 41
| ||||| |||||
Db 22 THLGIRLPRLSGLAGPPLGL 41

RESULT 187
US-09-794-748-8
Sequence 8, Application US/09794748
Patent No. US20020037315A1
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES

FILE REFERENCE: 28341/6280JL

CURRENT APPLICATION NUMBER: US/09/794,748

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: Patentln Ver. 2.0

SEQ ID NO 8

LENGTH: 501

TYPE: PRT

ORGANISM: Mus musculus

US-09-794-748-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLSGLAGPPLGL 41
| ||||| |||||
Db 22 THLGIRLPRLSGLAGPPLGL 41

RESULT 188
US-09-794-925-8

```
/ Sequence 8, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-794-925-8

Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      22 TQHGIRLPKRSGLGAPPLGL 41
      | ||||| ||||| |||||
Db      22 THLGIRLPKRSGLGAPPLGL 41

RESULT 189
US-09-681-442-8
/ Sequence 8, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ PRIOR FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-681-442-8
```

```
Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      22 TQHGIRLPKRSGLGAPPLGL 41
      | ||||| ||||| |||||
Db      22 THLGIRLPKRSGLGAPPLGL 41

RESULT 190
US-09-869-414-8
/ Sequence 8, Application US/09869414
/ Publication No. US20030077226A1
/ GENERAL INFORMATION:
/ APPLICANT: Bienkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-869-414-8

Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      22 TQHGIRLPKRSGLGAPPLGL 41
      | ||||| ||||| |||||
Db      22 THLGIRLPKRSGLGAPPLGL 41

RESULT 191
US-09-548-366-8
/ Sequence 8, Application US/09548366
/ Publication No. US20030104365A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
/ FILE REFERENCE: 28341/6280A
/ CURRENT APPLICATION NUMBER: US/09/548,366
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
```

LENGTH: 501
TYPE: PRT
ORGANISM: Mus musculus
US-09-548-366-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 THLGIRLPRLRSGLGAPPLGL 41

RESULT 192
US-10-652-927-8
Sequence 8, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:

APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N3
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US/10/652,927
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1999-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 8
LENGTH: 501
TYPE: PRT
ORGANISM: Mus musculus
US-10-652-927-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 THLGIRLPRLRSGLGAPPLGL 41

RESULT 193
US-10-652-830-8

Sequence 8, Application US/10652830
Publication No. US20040048303A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N1
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US/10/652,830
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 8
LENGTH: 501
TYPE: PRT
ORGANISM: Mus musculus
US-10-652-830-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 THLGIRLPRLRSGLGAPPLGL 41

RESULT 194
US-10-652-045-8
Sequence 8, Application US/10652045
Publication No. US20040166507A1
GENERAL INFORMATION:

APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N2
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: US/10/652,045
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 8
LENGTH: 501
TYPE: PRT
ORGANISM: Mus musculus
US-10-652-045-8

Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPPLGL 41
Db 22 THLGIRLPRLRSGLGAPPLGL 41

RESULT 195
US-10-476-935-8
Sequence 8, Application US/10476935
Publication No. US20040234976A1
GENERAL INFORMATION:

APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M1
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901

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/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-476-935-8
```

```
Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
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```
Qy      22 THGIRLPLRSGLAGPPLG 41
Db      22 THGIRLPLRSGLAGPPLG 41
```

```
RESULT 196
US-10-940-867-8
/ Sequence 8, Application US/10940867
/ Publication No. US20050026256A1
/ GENERAL INFORMATION:
/ APPLICANT: Guirney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinlikeon, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177.PCFA
/ CURRENT APPLICATION NUMBER: US/10/940,867
/ PRIOR FILING DATE: 2004-09-14
/ PRIOR APPLICATION NUMBER: US 09/806,194
/ PRIOR FILING DATE: 2001-03-26
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-940-867-8
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```
Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
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```
Qy      22 THGIRLPLRSGLAGPPLG 41
Db      22 THGIRLPLRSGLAGPPLG 41
```

```
RESULT 197
US-10-477-076-8
/ Sequence 8, Application US/10477076
/ Publication No. US20050080232A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M2
/ CURRENT APPLICATION NUMBER: US/10/477,076
/ CURRENT FILING DATE: 2003-11-06
```

```
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-477-076-8
```

```
Query Match      74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
Qy      22 THGIRLPLRSGLAGPPLG 41
Db      22 THGIRLPLRSGLAGPPLG 41
```

```
RESULT 198
US-10-872-198-12
/ Sequence 12, Application US/10872198
/ Publication No. US20050002897A1
/ GENERAL INFORMATION:
/ APPLICANT: Ulrich HAUPTS
/ APPLICANT: Andre KOUTERMANN
/ APPLICANT: Andreas SCHRIDIG
/ APPLICANT: Christian VOETSMIEIER
/ APPLICANT: Ulrich Kettling
/ TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
/ FILE REFERENCE: 04156.0002U4
/ CURRENT APPLICATION NUMBER: US/10/872,198
/ PRIOR FILING DATE: 2004-06-18
/ PRIOR APPLICATION NUMBER: 60/543,518
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: 60/524,960
/ PRIOR FILING DATE: 2003-11-25
/ PRIOR APPLICATION NUMBER: EP 04003058
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: EP 03025871
/ PRIOR FILING DATE: 2003-11-11
/ PRIOR APPLICATION NUMBER: EP 03025851
/ PRIOR FILING DATE: 2003-11-10
/ PRIOR APPLICATION NUMBER: EP 03013819
/ PRIOR FILING DATE: 2003-06-18
/ NUMBER OF SEQ ID NOS: 149
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 12
/ LENGTH: 358
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-872-198-12
```

```
Query Match      21.2%; Score 22; DB 1; Length 358;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
Qy      25 GIRLPLRSGLAGPPLG 40
Db      66 GVVVPTQGWKESBLG 81
```

```
RESULT 199
US-10-872-197A-12
/ Sequence 12, Application US/10872197A
```

```
; Publication No. US20050059126A1
; GENERAL INFORMATION:
; APPLICANT: Ulrich HAUPRS
; APPLICANT: Andre KOLTERMANN
; APPLICANT: Andreas SCHEIDIG
; APPLICANT: Christian VOTEMEIER
; APPLICANT: Ulrich KETTLING
; TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
; FILE REFERENCE: 04156.000203
; CURRENT FILING DATE: US/10/872,197A
; PRIOR FILING DATE: 2004-06-18
; PRIOR APPLICATION NUMBER: 60/524,960
; PRIOR FILING DATE: 2003-11-25
; PRIOR APPLICATION NUMBER: EP 03025871
; PRIOR FILING DATE: 2003-11-11
; PRIOR APPLICATION NUMBER: EP 03013819
; PRIOR FILING DATE: 2003-11-10
; NUMBER OF SEQ ID NOS: 96
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 12
; LENGTH: 358
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-872-197A-12

Query Match      21.2% Score 22; DB 1; Length 358;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      66 GVVVPTYGKWEGLG 81

RESULT 200
US-10-372-473-4
; Sequence 4, Application US/10372473
; Publication No. US20040005691A1
; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; APPLICANT: Howe, W. Jeffery
; TITLE OF INVENTION: Modified BACE
; FILE REFERENCE: MBHB 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; CURRENT FILING DATE: 2003-02-21
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 4
; LENGTH: 391
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MISC FEATURE
; OTHER INFORMATION: Human beta-secretase.
US-10-372-473-4

Query Match      21.2% Score 22; DB 1; Length 391;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      72 GVVVPTYGKWEGLG 87

RESULT 201
US-10-400-273-4
; Sequence 4, Application US/10400273
; Publication No. US20040014194A1
; GENERAL INFORMATION:
; APPLICANT: Beyer, Brian
; APPLICANT: Hammond, Gerald S
; APPLICANT: Reichert, Paul
```

```
; APPLICANT: Strickland, Corey
; APPLICANT: Wang, Wenyan
; APPLICANT: Weber, Patricia C
; APPLICANT: Wong, Gwendolyn
; APPLICANT: Zhang, Lili
; TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S
; FILE REFERENCE: JBO1531-K-US
; CURRENT APPLICATION NUMBER: US/10/400,273
; CURRENT FILING DATE: 2003-03-26
; PRIOR APPLICATION NUMBER: 60/367,937
; PRIOR FILING DATE: 2002-03-27
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 403
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-400-273-4

Query Match      21.2% Score 22; DB 1; Length 403;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      80 GVVVPTYGKWEGLG 95

RESULT 202
US-10-837-021A-2
; Sequence 2, Application US/10837021A
; Publication No. US20040265965A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P
; APPLICANT: McConlogue, Lisa
; APPLICANT: Basl, Guritbal
; APPLICANT: Sinha, Sukatno
; TITLE OF INVENTION: Glycosylation Variants of BACE
; FILE REFERENCE: MBHB-03-268-A
; CURRENT APPLICATION NUMBER: US/10/837,021A
; CURRENT FILING DATE: 2004-04-30
; PRIOR APPLICATION NUMBER: 60/467,509
; PRIOR FILING DATE: 2003-05-02
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 2
; LENGTH: 406
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Human BACE with asparagine to alanine (N223A) mutation.
US-10-837-021A-2

Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPTYGKWEGLG 97

RESULT 203
US-10-837-021A-3
; Sequence 3, Application US/10837021A
; Publication No. US20040265965A1
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P
; APPLICANT: McConlogue, Lisa
; APPLICANT: Basl, Guritbal
; APPLICANT: Sinha, Sukatno
; TITLE OF INVENTION: Glycosylation Variants of BACE
; FILE REFERENCE: MBHB-03-268-A
```

```
/ CURRENT APPLICATION NUMBER: US/10/837,021A
/ CURRENT FILING DATE: 2004-04-30
/ PRIOR APPLICATION NUMBER: 60/467,509
/ PRIOR FILING DATE: 2003-05-02
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.3
/ SEQ ID NO 3
/ LENGTH: 406
/ TYPE: PRT
/ ORGANISM: Artificial
/ FEATURE:
/ OTHER INFORMATION: Human BACE with serine to isoleucine (S174I) and asparagine to
US-10-837-021A-3
```

```
Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
QY      25 GIRLPRLRSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPTYTGKWEGLG 97
```

```
RESULT 204
US-10-837-021A-4
/ Sequence 4, Application US/10837021A
/ Publication No. US20040265965A1
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Basi, Gurigbal
/ APPLICANT: Sinha, Sukatno
/ TITLE OF INVENTION: Glycosylation Variants of BACE
/ FILE REFERENCE: MBHB-03-268-A
/ CURRENT APPLICATION NUMBER: US/10/837,021A
/ CURRENT FILING DATE: 2004-04-30
/ PRIOR APPLICATION NUMBER: 60/467,509
/ PRIOR FILING DATE: 2003-05-02
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.3
/ SEQ ID NO 4
/ LENGTH: 406
/ TYPE: PRT
/ ORGANISM: Artificial
/ FEATURE:
/ OTHER INFORMATION: Human BACE with serine to isoleucine (S174I), asparagine to
/ OTHER INFORMATION: glutamine (N153Q) and asparagine to alanine (N223A) mutations.
US-10-837-021A-4
```

```
Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
QY      25 GIRLPRLRSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPTYTGKWEGLG 97
```

```
RESULT 205
US-10-837-021A-5
/ Sequence 5, Application US/10837021A
/ Publication No. US20040265965A1
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Basi, Gurigbal
/ APPLICANT: Sinha, Sukatno
/ TITLE OF INVENTION: Glycosylation Variants of BACE
/ FILE REFERENCE: MBHB-03-268-A
/ CURRENT APPLICATION NUMBER: US/10/837,021A
/ CURRENT FILING DATE: 2004-04-30
/ PRIOR APPLICATION NUMBER: 60/467,509
```

```
/ PRIOR FILING DATE: 2003-05-02
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.3
/ SEQ ID NO 5
/ LENGTH: 406
/ TYPE: PRT
/ ORGANISM: Artificial
/ FEATURE:
/ OTHER INFORMATION: Human BACE with serine to isoleucine (S174I), asparagine to
/ OTHER INFORMATION: glutamine (N153Q), asparagine to alanine (N223A) and asparagine
US-10-837-021A-5
```

```
Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
QY      25 GIRLPRLRSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPTYTGKWEGLG 97
```

```
RESULT 206
US-10-400-273-5
/ Sequence 5, Application US/10400273
/ Publication No. US20040014194A1
/ GENERAL INFORMATION:
/ APPLICANT: Beyer, Brian
/ APPLICANT: Hammond, Gerald S
/ APPLICANT: Reichert, Paul
/ APPLICANT: Strickland, Corey
/ APPLICANT: Wang, Wenyuan
/ APPLICANT: Weber, Patricia C
/ APPLICANT: Wong, Gwendolyn
/ APPLICANT: Zhang, Lili
/ TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S
/ FILE REFERENCE: JB01531-K-US
/ CURRENT APPLICATION NUMBER: US/10/400,273
/ CURRENT FILING DATE: 2003-03-26
/ PRIOR APPLICATION NUMBER: 60/367,937
/ PRIOR FILING DATE: 2002-03-27
/ NUMBER OF SEQ ID NOS: 5
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 5
/ LENGTH: 408
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-400-273-5
```

```
Query Match      21.2% Score 22; DB 1; Length 408;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
QY      25 GIRLPRLRSGLGAPLG 40
      | : | | | | |
Db      85 GVVVPTYTGKWEGLG 100
```

```
RESULT 207
US-10-400-273-1
/ Sequence 1, Application US/10400273
/ Publication No. US20040014194A1
/ GENERAL INFORMATION:
/ APPLICANT: Beyer, Brian
/ APPLICANT: Hammond, Gerald S
/ APPLICANT: Reichert, Paul
/ APPLICANT: Strickland, Corey
/ APPLICANT: Wang, Wenyuan
/ APPLICANT: Weber, Patricia C
/ APPLICANT: Wong, Gwendolyn
/ APPLICANT: Zhang, Lili
/ TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S
/ FILE REFERENCE: JB01531-K-US
```



```

; CURRENT APPLICATION NUMBER: US/10/400,273
; CURRENT FILING DATE: 2003-03-26
; PRIOR APPLICATION NUMBER: 60/367,937
; PRIOR FILING DATE: 2002-03-27
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 411
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-400-273-1

Query Match          21.2%  Score 22; DB 1; Length 411;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
Db      82 GVVYVYTGKWEGBLG 97

RESULT 208
US-10-627-473-19
; Sequence 19, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; TITLE OF INVENTION: (BACK) AND METHODS OF USE THEREOF
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 19
; LENGTH: 411
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-19

Query Match          21.2%  Score 22; DB 1; Length 411;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
Db      85 GVVYVYTGKWEGBLG 100

RESULT 209
US-10-627-473-20
; Sequence 20, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; TITLE OF INVENTION: (BACK) AND METHODS OF USE THEREOF
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681

; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 20
; LENGTH: 411
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-20

Query Match          21.2%  Score 22; DB 1; Length 411;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
Db      85 GVVYVYTGKWEGBLG 100

RESULT 210
US-10-281-092-9
; Sequence 9, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Wainpin
; APPLICANT: Hong, Lin
; APPLICANT: Koelsch, Gerald E.
; APPLICANT: Loy, Jeffrey A.
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasumadram, Thippeswamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; TITLE OF INVENTION: ACTIVITY AND METHODS OF USE THEREOF
; FILE REFERENCE: 2932.1001-004
; CURRENT APPLICATION NUMBER: US/10/281,092
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: US 10/032,818
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 414
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: memapsin 2
US-10-281-092-9

Query Match          21.2%  Score 22; DB 1; Length 414;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
```



```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy 25 GIRLPLRSGLGAPLG 40
| : | | | |
Db 99 GVVVPTYQKKWEGELG 114
```

```
RESULT 215
US-09-794-748-28
; Sequence 28, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62801JL
; CURRENT FILING DATE: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-748-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy 25 GIRLPLRSGLGAPLG 40
| : | | | |
Db 99 GVVVPTYQKKWEGELG 114
```

```
RESULT 216
US-09-794-925-28
; Sequence 28, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
```

```
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/62801H
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy 25 GIRLPLRSGLGAPLG 40
| : | | | |
Db 99 GVVVPTYQKKWEGELG 114
```

```
RESULT 217
US-09-681-442-28
; Sequence 28, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy 25 GIRLPLRSGLGAPLG 40
| : | | | |
```


APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREOF
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23

```

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRF
; ORGANISM: Homo sapiens
US-10-477-076-28
```

```

Query Match          21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```

Qy      25 GIRLPLRSGLGAPLG 40
      | : | | | | | | | | | |
Db      99 GVVVPTYQKWEGLG 114
```

RESULT 226

```

US-10-872-198-139
; Sequence 139, Application US/10872198
; Publication No. US2005002897A1
; GENERAL INFORMATION:
; APPLICANT: Ulrich HAUPTS
; APPLICANT: Andre KOLTERMANN
; APPLICANT: Andreas SCHRIDIG
; APPLICANT: Christian VOETSMETTER
; APPLICANT: Ulrich Ketting
; TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
; FILE REFERENCE: 04156, 000204
; CURRENT APPLICATION NUMBER: US/10/872,198
; PRIOR FILING DATE: 2004-06-18
; PRIOR APPLICATION NUMBER: 60/543,518
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: 60/524,960
; PRIOR FILING DATE: 2003-11-25
; PRIOR APPLICATION NUMBER: EP 04003058
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: EP 03025871
; PRIOR FILING DATE: 2003-11-11
; PRIOR APPLICATION NUMBER: EP 03025851
; PRIOR FILING DATE: 2003-11-10
; PRIOR APPLICATION NUMBER: EP 03013819
; PRIOR FILING DATE: 2003-06-18
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 139
; LENGTH: 440
; TYPE: PRF
; ORGANISM: Homo sapiens
US-10-872-198-139
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Query Match          21.2%; Score 22; DB 1; Length 440;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```

Qy      25 GIRLPLRSGLGAPLG 40
      | : | | | | | | | | | |
Db      66 GVVVPTYQKWEGLG 81
```

RESULT 227

```

US-09-969-671A-4
; Sequence 4, Application US/09969671A
; Publication No. US20030036112A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
```

```

; TITLE OF INVENTION: ASP2
; FILE REFERENCE: GH-70368-D1
; CURRENT APPLICATION NUMBER: US/09/969,671A
; CURRENT FILING DATE: 2001-10-03
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; PRIOR APPLICATION NUMBER: 09/694,200
; PRIOR FILING DATE: 2000-10-23
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 774
; TYPE: PRF
; ORGANISM: Homo sapiens
; NAME/KEY: unknown
; LOCATION: (747) (749) (755) (761) (763) (764) (765) (766) (767) (768) (769) (774)
; OTHER INFORMATION: wherein Xaa can be represented by any one of the twenty naturally
; OTHER INFORMATION: occurring amino acids
US-09-969-671A-4
```

```

Query Match          21.2%; Score 22; DB 1; Length 774;
Best Local Similarity 80.0%; Pred. No. 2.3e+02;
Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```

Qy      22 TQHG1 26
      | | | | |
Db      713 TTHGI 717
```

RESULT 228

```

US-10-308-365-4
; Sequence 4, Application US/10308365
; Publication No. US20030109022A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/308,365
; CURRENT FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 774
; TYPE: PRF
; ORGANISM: HOMO SAPIENS
; FEATURE: MISCELLANEOUS FEATURE
; NAME/KEY: UNSURE
; LOCATION: (747) (749) (755) (761) (763) (764) (765) (766) (767) (768) (769) (774)
; OTHER INFORMATION: OTHER INFORMATION: Xaa = amino acid
US-10-308-365-4
```

```

Query Match          21.2%; Score 22; DB 1; Length 774;
Best Local Similarity 80.0%; Pred. No. 2.3e+02;
Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```

Qy      22 TQHG1 26
      | | | | |
Db      713 TTHGI 717
```

RESULT 229

```

US-10-829-717-4
; Sequence 4, Application US/10829717
; Publication No. US20050101556A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/829,717
; CURRENT FILING DATE: 2004-04-22
; PRIOR APPLICATION NUMBER: US/10/308,365
; PRIOR FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 774
; TYPE: PRT
; ORGANISM: HOMO SAPIENS
; FEATURE: FEATURE: MISCELLANEOUS FEATURE
; NAME/KEY: UNSURE
; LOCATION: (747) (749) (755) (761) (763) (764) (765) (766) (767) (768) (769) (774)
; OTHER INFORMATION: OTHER INFORMATION: Xaa = amino acid
US-10-829-717-4

```

```

Query Match      21.2%; Score 22; DB 1; Length 774;
Best Local Similarity 80.0%; Pred. No. 2.3e+02;
Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

QY      22 TTHGI 26
DB      713 TTHGI 717

```

```

RESULT 230
US-10-726-967A-52
; Sequence 52, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Baillinger, Marcus
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 52
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Residues 74-101 of human BACE1 preprosequence
US-10-726-967A-52

```

```

Query Match      13.5%; Score 14; DB 1; Length 28;
Best Local Similarity 66.7%; Pred. No. 5.7;
Matches 2; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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```

QY      36 GAP 38
DB      9 GSP 11

```

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Search completed: August 3, 2005, 11:50:14
Job time : 2 secs

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rgep2ndb:AR178469	+	104.00	62.06	38.08	2541	ACCESSION:AR178469	Unknown. S	rgep2ndb:AR478789	-	32.00	41.02	280.82	1302	ACCESSION:AR478789	Unknown. S
rgep2ndb:ES0816	+	104.00	62.06	38.08	2541	ACCESSION:ES0816	unidentified	rgep2ndb:AR478735	-	32.00	41.02	280.82	1302	ACCESSION:AR478735	Unknown. S
rgep2ndb:AX002655	+	104.00	62.06	38.08	2541	ACCESSION:AX002655	unidentified	rgep2ndb:AR531995	-	32.00	41.02	280.82	1302	ACCESSION:AR531995	Unknown. S
rgep2ndb:AX700452	+	104.00	62.06	38.08	2541	ACCESSION:AX700452	unidentified	rgep2ndb:AR540896	-	32.00	41.02	280.82	1302	ACCESSION:AR540896	Unknown. S
rgep2ndb:AR305033	+	104.00	62.01	38.30	3252	ACCESSION:AR305033	Unknown. S	rgep2ndb:AR560106	-	32.00	41.02	280.82	1302	ACCESSION:AR560106	Unknown. S
rgep2ndb:AX062111	+	104.00	62.01	38.30	3252	ACCESSION:AX062111	Unknown. S	rgep2ndb:AX105407	-	32.00	41.02	280.82	1302	ACCESSION:AX105407	Unknown. S
rgep2ndb:AX063201	+	104.00	62.01	38.30	3252	ACCESSION:AX063201	Unknown. S	rgep2ndb:AR578845	-	32.00	41.02	280.82	1302	ACCESSION:AR578845	Unknown. S
rgep2ndb:AX472368	+	104.00	62.01	38.30	3252	ACCESSION:AX472368	Unknown. S	rgep2ndb:AR700454	-	32.00	41.02	280.82	1302	ACCESSION:AR700454	Unknown. S
rgep2ndb:AX700453	+	104.00	62.01	38.30	3252	ACCESSION:AX700453	Unknown. S	rgep2ndb:AR224123	-	32.00	41.02	280.82	1305	ACCESSION:AR224123	Unknown. S
rgep2ndb:AF200193	+	104.00	62.01	38.30	3252	ACCESSION:AF200193	Unknown. S	rgep2ndb:AR269254	-	32.00	41.02	280.82	1305	ACCESSION:AR269254	Unknown. S
rgep2ndb:BC065492	+	104.00	61.98	38.46	3893	ACCESSION:BC065492	Unknown. S	rgep2ndb:AR478809	-	32.00	41.02	280.82	1305	ACCESSION:AR478809	Unknown. S
), complete cds.								rgep2ndb:AR487375	-	32.00	41.02	280.82	1305	ACCESSION:AR487375	Unknown. S
rgep2ndb:CQ824594	+	104.00	61.91	38.78	5655	ACCESSION:CQ824594	Homo sapiens	rgep2ndb:AR532015	-	32.00	41.02	280.82	1305	ACCESSION:AR532015	Unknown. S
rgep2ndb:CQ824593	+	104.00	61.91	38.80	5700	ACCESSION:CQ824593	Homo sapiens	rgep2ndb:AR540916	-	32.00	41.02	280.82	1305	ACCESSION:AR540916	Unknown. S
rgep2ndb:CQ824592	+	104.00	61.91	38.80	5700	ACCESSION:CQ824592	Homo sapiens	rgep2ndb:AR560126	-	32.00	41.02	280.82	1305	ACCESSION:AR560126	Unknown. S
rgep2ndb:AX364333	+	104.00	61.91	38.80	5700	ACCESSION:AX364333	Homo sapiens	rgep2ndb:AX105434	-	32.00	41.02	280.82	1305	ACCESSION:AX105434	Unknown. S
rgep2ndb:CQ824591	+	104.00	61.90	38.82	5832	ACCESSION:CQ824591	Homo sapiens	rgep2ndb:AX578872	-	32.00	41.02	280.82	1305	ACCESSION:AX578872	Unknown. S
rgep2ndb:CQ726574	+	104.00	61.90	38.82	5832	ACCESSION:CQ726574	Homo sapiens	rgep2ndb:AR505438	-	32.00	41.02	280.82	1333	ACCESSION:AR505438	Unknown. S
rgep2ndb:AF201468	+	104.00	61.90	38.82	5878	ACCESSION:AF201468	Homo sapiens	rgep2ndb:BD235895	-	32.00	41.01	280.88	1341	ACCESSION:BD235895	Unknown. S
rgep2ndb:AR404205	+	104.00	61.71	39.73	16080	ACCESSION:AR404205	Unknown. S	rgep2ndb:AR224101	-	32.00	41.01	280.89	1341	ACCESSION:AR224101	Unknown. S
rgep2ndb:AB032975	+	91.00	58.08	61.03	5874	ACCESSION:AB032975	Homo sapiens	rgep2ndb:AR269232	-	32.00	41.01	280.89	1341	ACCESSION:AR269232	Unknown. S
rgep2ndb:AB032976	+	77.00	54.22	94.21	1506	ACCESSION:AB032976	Unknown. S	rgep2ndb:AR478787	-	32.00	41.01	280.89	1341	ACCESSION:AR478787	Unknown. S
rgep2ndb:BD335888	+	77.00	54.16	94.80	2043	ACCESSION:BD335888	Mus musculus	rgep2ndb:AR487353	-	32.00	41.01	280.89	1341	ACCESSION:AR487353	Unknown. S
rgep2ndb:AR224095	+	77.00	54.16	94.80	2043	ACCESSION:AR224095	Unknown. S	rgep2ndb:AR531993	-	32.00	41.01	280.89	1341	ACCESSION:AR531993	Unknown. S
rgep2ndb:AR69226	+	77.00	54.16	94.80	2043	ACCESSION:AR69226	Unknown. S	rgep2ndb:AR540894	-	32.00	41.01	280.89	1341	ACCESSION:AR540894	Unknown. S
rgep2ndb:AR478780	+	77.00	54.16	94.80	2043	ACCESSION:AR478780	Unknown. S	rgep2ndb:AR560104	-	32.00	41.01	280.89	1341	ACCESSION:AR560104	Unknown. S
rgep2ndb:AR87347	+	77.00	54.16	94.80	2043	ACCESSION:AR87347	Unknown. S	rgep2ndb:AX578841	-	32.00	41.01	280.89	1341	ACCESSION:AX578841	Unknown. S
rgep2ndb:AR531986	+	77.00	54.16	94.80	2043	ACCESSION:AR531986	Unknown. S	rgep2ndb:AX578841	-	32.00	41.01	280.89	1341	ACCESSION:AX578841	Unknown. S
rgep2ndb:AR560097	+	77.00	54.16	94.80	2043	ACCESSION:AR560097	Unknown. S	rgep2ndb:AR560108	-	32.00	41.01	280.89	1341	ACCESSION:AR560108	Unknown. S
rgep2ndb:AX105389	+	77.00	54.16	94.80	2043	ACCESSION:AX105389	Unknown. S	rgep2ndb:AR224105	-	32.00	41.01	280.89	1362	ACCESSION:AR224105	Unknown. S
rgep2ndb:AX578827	+	77.00	54.16	94.80	2043	ACCESSION:AX578827	Mus musculus	rgep2ndb:AR269236	-	32.00	41.01	280.89	1362	ACCESSION:AR269236	Unknown. S
rgep2ndb:AF200346	+	77.00	54.16	94.80	2043	ACCESSION:AF200346	Mus musculus	rgep2ndb:AR487357	-	32.00	41.01	280.89	1362	ACCESSION:AR487357	Unknown. S
rgep2ndb:AX01989	+	77.00	54.15	94.91	2158	ACCESSION:AX01989	Rattus norvegicus	rgep2ndb:AR531997	-	32.00	41.01	280.93	1362	ACCESSION:AR531997	Unknown. S
rgep2ndb:AR190727	+	77.00	54.15	94.91	2158	ACCESSION:AR190727	Rattus norvegicus	rgep2ndb:AR540898	-	32.00	41.01	280.93	1362	ACCESSION:AR540898	Unknown. S
rgep2ndb:CQ824595	+	77.00	54.04	96.06	3880	ACCESSION:CQ824595	Mus musculus	rgep2ndb:AR560110	-	32.00	41.01	280.93	1362	ACCESSION:AR560110	Unknown. S
rgep2ndb:AR190726	+	77.00	54.04	96.06	3880	ACCESSION:AR190726	Mus musculus	rgep2ndb:AX105411	-	32.00	41.01	280.93	1362	ACCESSION:AX105411	Unknown. S
rgep2ndb:BC048189	+	38.00	45.03	96.15	4059	ACCESSION:BC048189	Mus musculus	rgep2ndb:AX578849	-	32.00	41.01	280.93	1362	ACCESSION:AX578849	Unknown. S
rgep2ndb:AR404203	+	38.00	42.67	257.72	2348	ACCESSION:AR404203	Unknown. S	rgep2ndb:CQ772935	-	32.00	41.01	280.93	1362	ACCESSION:CQ772935	Unknown. S
rgep2ndb:AR404204	+	38.00	42.67	257.72	2348	ACCESSION:AR404204	Unknown. S	rgep2ndb:AF338817	-	32.00	41.01	280.96	1380	ACCESSION:AF338817	Unknown. S
rgep2ndb:BC036084	+	35.50	41.95	268.15	2174	ACCESSION:BC036084	Homo sapiens	rgep2ndb:BD235906	-	32.00	41.01	280.96	1380	ACCESSION:BD235906	Unknown. S
), complete cds.								rgep2ndb:AR224102	-	32.00	41.01	280.96	1380	ACCESSION:AR224102	Unknown. S
rgep2ndb:AX700446	-	35.00	41.77	270.61	2526	ACCESSION:AX700446	Homo sapiens	rgep2ndb:AR224106	-	32.00	41.01	280.96	1380	ACCESSION:AR224106	Unknown. S
rgep2ndb:AR190725	-	35.00	41.77	270.61	2526	ACCESSION:AR190725	Homo sapiens	rgep2ndb:AR269233	-	32.00	41.01	280.96	1380	ACCESSION:AR269233	Unknown. S
rgep2ndb:BC065492	-	35.00	41.69	271.75	3893	ACCESSION:BC065492	Homo sapiens	rgep2ndb:AR69237	-	32.00	41.01	280.96	1380	ACCESSION:AR69237	Unknown. S
), complete cds.								rgep2ndb:AR478788	-	32.00	41.01	280.96	1380	ACCESSION:AR478788	Unknown. S
rgep2ndb:CQ824594	-	35.00	41.62	272.72	5625	ACCESSION:CQ824594	Homo sapiens	rgep2ndb:AR487352	-	32.00	41.01	280.96	1380	ACCESSION:AR487352	Unknown. S
rgep2ndb:CQ824593	-	35.00	41.62	272.72	5700	ACCESSION:CQ824593	Homo sapiens	rgep2ndb:AR478734	-	32.00	41.01	280.96	1380	ACCESSION:AR478734	Unknown. S
rgep2ndb:AX364333	-	35.00	41.62	272.78	5757	ACCESSION:AX364333	Homo sapiens	rgep2ndb:AR487358	-	32.00	41.01	280.96	1380	ACCESSION:AR487358	Unknown. S
rgep2ndb:AB032975	-	35.00	41.62	272.81	5814	ACCESSION:AB032975	Homo sapiens	rgep2ndb:AR531994	-	32.00	41.01	280.96	1380	ACCESSION:AR531994	Unknown. S
rgep2ndb:CQ824591	-	35.00	41.61	272.82	5832	ACCESSION:CQ824591	Homo sapiens	rgep2ndb:AR540895	-	32.00	41.01	280.96	1380	ACCESSION:AR540895	Unknown. S
rgep2ndb:CQ726574	-	35.00	41.61	272.82	5878	ACCESSION:CQ726574	Homo sapiens	rgep2ndb:AR560105	-	32.00	41.01	280.96	1380	ACCESSION:AR560105	Unknown. S
rgep2ndb:AR404205	-	35.00	41.61	272.83	5878	ACCESSION:AR404205	Homo sapiens	rgep2ndb:AR578849	-	32.00	41.01	280.96	1380	ACCESSION:AR578849	Unknown. S
rgep2ndb:AR404205	-	35.00	41.42	275.44	16080	ACCESSION:AR404205	Unknown. S	rgep2ndb:AR531995	-	32.00	41.01	280.96	1380	ACCESSION:AR531995	Unknown. S
rgep2ndb:AR404205	-	33.00	41.22	278.21	2158	ACCESSION:AR404205	Rattus norvegicus	rgep2ndb:AR560109	-	32.00	41.01	280.96	1380	ACCESSION:AR560109	Unknown. S
rgep2ndb:AR190727	-	33.00	41.22	278.21	2158	ACCESSION:AR190727	Rattus norvegicus	rgep2ndb:AX105405	-	32.00	41.01	280.96	1380	ACCESSION:AX105405	Unknown. S
rgep2ndb:CQ824595	-	33.00	41.10	279.69	3880	ACCESSION:CQ824595	Mus musculus	rgep2ndb:AX578843	-	32.00	41.01	280.96	1380	ACCESSION:AX578843	Unknown. S
rgep2ndb:AR190726	-	33.00	41.10	279.69	3880	ACCESSION:AR190726	Mus musculus	rgep2ndb:AX578843	-	32.00	41.01	280.96	1380	ACCESSION:AX578843	Unknown. S
rgep2ndb:BC048189	-	33.00	41.10	279.80	4059	ACCESSION:BC048189	Mus musculus	rgep2ndb:CQ772938	-	32.00	41.01	280.96	1380	ACCESSION:CQ772938	Unknown. S
rgep2ndb:AB089958	-	32.00	41.10	278.51	517	ACCESSION:AB089958	Homo sapiens	rgep2ndb:AR531994	-	32.00	41.01	280.96	1380	ACCESSION:AR531994	Unknown. S
rgep2ndb:AR224122	-	32.00	41.02	280.79	1287	ACCESSION:AR224122	Unknown. S	rgep2ndb:AR540898	-	32.00	41.01	280.96	1380	ACCESSION:AR540898	Unknown. S
rgep2ndb:AR269253	-	32.00	41.02	280.79	1287	ACCESSION:AR269253	Unknown. S	rgep2ndb:CQ772938	-	32.00	41.01	280.96	1380	ACCESSION:CQ772938	Unknown. S
rgep2ndb:AR478808	-	32.00	41.02	280.79	1287	ACCESSION:AR478808	Unknown. S	rgep2ndb:AR560109	-	32.00	41.01	280.96	1380	ACCESSION:AR560109	Unknown. S
rgep2ndb:AR478734	-	32.00	41.02	280.79	1287	ACCESSION:AR478734	Unknown. S	rgep2ndb:AR578845	-	32.00	41.01	280.96	1380	ACCESSION:AR578845	Unknown. S
rgep2ndb:AR532014	-	32.00	41.02	280.79	1287	ACCESSION:AR532014	Unknown. S	rgep2ndb:AR560106	-	32.00	41.01	280.96	1380	ACCESSION:AR560106	Unknown. S
rgep2ndb:AR560125	-	32.00	41.02	280.79	1287	ACCESSION:AR560125	Unknown. S	rgep2ndb:AX700446	-	32.00	41.01	280.96	1380	ACCESSION:AX700446	Unknown. S
rgep2ndb:AX105434	-	32.00	41.02	280.79	1287	ACCESSION:AX105434	Unknown. S	rgep2ndb:AR540896	-	32.00	41.01	280.96	1380	ACCESSION:AR540896	Unknown. S
rgep2ndb:AX578870	-	32.00	41.02	280.79	1287	ACCESSION:AX578870	Unknown. S	rgep2ndb:AR560104	-	32.00	41.01	280.96	1380	ACCESSION:AR560104	Unknown. S
rgep2ndb:AX573870	-	32.00	41.02	280.79	1287	ACCESSION:AX573870	Unknown. S	rgep2ndb:AR560108	-	32.00	41.01	280.96	1380	ACCESSION:AR560108	Unknown. S
rgep2ndb:BD235897	-	32.00	41.02	280.82	1302	ACCESSION:BD235897	Unknown. S	rgep2ndb:BD235887	-	32.00	40.94	281.85	1977	ACCESSION:BD235	

Sequence name: rgep2ndb:AR224122

Sequence documentation:

LOCUS AR224122 1287 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 50 from patent US 6440698.
ACCESSION AR224122
VERSION AR224122.1 GI:23332782
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6440698-A 50 27-AUG-2002;

FEATURES Location/Qualifiers

1..1287
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224122 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHlglylleArgLeuProleuArgSerglyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCCGCTGCTGCGCAGCGCCTGCGGCGCGCC 113
38 oLeuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR269253

Sequence documentation:

LOCUS AR269253 1287 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 50 from patent US 6500667.
ACCESSION AR269253
VERSION AR269253.1 GI:29700221
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Apatryl protease 2 (Asp2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 50 31-DEC-2002;

FEATURES Location/Qualifiers

1..1287
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269253 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHlglylleArgLeuProleuArgSerglyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCCGCTGCTGCGCAGCGCCTGCGGCGCGCC 113
38 oLeuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR478808

Sequence documentation:

LOCUS AR478808 1287 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 50 from patent US 6699671.
ACCESSION AR478808
VERSION AR478808.1 GI:47237528
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6699671-A 50 02-MAR-2004;

FEATURES Location/Qualifiers

1..1287
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478808 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHlglylleArgLeuProleuArgSerglyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCCGCTGCTGCGCAGCGCCTGCGGCGCGCC 113
38 oLeuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR487374

Sequence documentation:

LOCUS AR487374 1287 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 50 from patent US 6706485.
ACCESSION AR487374
VERSION AR487374.1 GI:47252472
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 50 16-MAR-2004;

FEATURES Location/Qualifiers

1..1287
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487374 ..
Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1SG1Y1LeArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGCCGACGGGCTGGGGGGGCCCC 113
|||||
38 OleuG1yLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR532014

Sequence documentation:

LOCUS AR532014 1287 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 50 from patent US 6727074.
ACCESSION AR532014
VERSION AR532014.1 GI:53920548
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1287)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6727074-A 50 27-APR-2004;
FEATURES location/Qualifiers
source 1..1287
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR532014 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1SG1Y1LeArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGCCGACGGGCTGGGGGGGCCCC 113
|||||
38 OleuG1yLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR540915

Sequence documentation:

LOCUS AR540915 1287 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 50 from patent US 6737510.
ACCESSION AR540915
VERSION AR540915.1 GI:53932428
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1287)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6737510-A 50 18-MAY-2004;
FEATURES location/Qualifiers
source 1..1287
/organism="unknown"
/mol_type="genomic DNA"

REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6737510-A 50 18-MAY-2004;
FEATURES location/Qualifiers
source 1..1287
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540915 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1SG1Y1LeArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGCCGACGGGCTGGGGGGGCCCC 113
|||||
38 OleuG1yLeu
|||||
114 CCTGGGGGCTG 123
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Sequence name: rgep2ndb:AR560125

Sequence documentation:

LOCUS AR560125 1287 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 50 from patent US 6753163.
ACCESSION AR560125
VERSION AR560125.1 GI:53970492
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1287)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6753163-A 50 22-JUN-2004;
FEATURES location/Qualifiers
source 1..1287
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560125 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1SG1Y1LeArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGCCGACGGGCTGGGGGGGCCCC 113
|||||
38 OleuG1yLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rgep2ndb:AX105432

Sequence documentation:

LOCUS AX105432 1287 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 50 from Patent WO0123533.
ACCESSION AX105432
VERSION AX105432.1 GI:13921541
KEYWORDS

SOURCE
ORGANISM synthetic construct
other sequences; artificial sequences.

REFERENCE
1 Gurney, M. and Bienkowski, M.J.

AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: WO 0123533-A 50 05-APR-2001;

Pharmacia & Upjohn Company (US)

FEATURES
source Location/Qualifiers

1..1287
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="Hu-Asp2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX105432 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching Length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGCTGCCCTGCGCAGCGGCGCTGGGGGGGCGCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGGCTTG 123
```

Sequence name: rgep2ndb:AX573870

Sequence documentation:

LOCUS AX573870 1287 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 50 from Patent EP1249498.
ACCESSION AX573870
VERSION AX573870.1 GI:27551507
KEYWORDS

SOURCE
ORGANISM synthetic construct
other sequences; artificial sequences.

REFERENCE
1 Gurney, M. and Bienkowski, M.J.

AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: EP 1249498-A 50 16-OCT-2002;

Pharmacia & Upjohn Company (US)

FEATURES
source Location/Qualifiers

1..1287
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="Hu-Asp2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX573870 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 37.5

Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGCTGCCCTGCGCAGCGGCGCTGGGGGGGCGCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGGCTTG 123
```

Sequence name: rgep2ndb:BD235897

Sequence documentation:

LOCUS BD235897 1302 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.

ACCESSION BD235897
VERSION BD235897.1 GI:33045667

KEYWORDS JP 2002526081-A/13.

SOURCE Homo sapiens (human)

ORGANISM

REFERENCE
1 Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and Mammalia, Butcheria; Primates; Catarrhini; Homiidae; Homo.

AUTHORS Alzheimer's disease secretase

JOURNAL Patent: JP 2002526081-A 13 20-AUG-2002;

Pharmacia AND Upjohn CO

COMMENT OS Homo sapiens (human)

PN JP 2002526081-A/13

PD 20-AUG-2002

PE 23-SEP-1999 JP 2000574268

PR 24-SEP-1998 US 60/101594

PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI

HEINRICHSON, PI LOUIS A PARODI, RIQIANG YAN

PC C12N1/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC C12N1/19,

PC C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/ PC 15,

G01N33/50//C12N1/21, C12R1/19, C12N15/00, C12N5/00 CC

Alzheimer's disease secretase

FT source Location/Qualifiers

1..1302
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:3606"

Alignment of: us-10-726-967a-1 x BD235897 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching Length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTCAGCATGTAATTCGTCGCACTGCGAGCGGCTGGGGTGGCTCC 53
```

38 OLeuGLYLeu 41
|||||
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR224103

Sequence documentation:
LOCUS AR224103 1302 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 25 from patent US 6440698.
ACCESSION AR224103
VERSION AR224103.1 GI:23332763
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6440698-A 25 27-AUG-2002;
FEATURES Location/Qualifiers
source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224103 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.5
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGLYTLAArgLeuProLeuArgSerGlyLeuGLYAlAPr 38
|||||
4 ACTCGACATGGATTGCTGCGCTGACGCGGTGGGTGGCTCC 53
38 OLeuGLYLeu 41
|||||
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR269234

Sequence documentation:
LOCUS AR269234 1302 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 25 from patent US 6500667.
ACCESSION AR269234
VERSION AR269234.1 GI:29700202
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Abapetyl protease 2 (Abp2) antisense oligonucleotides
JOURNAL Patent: US 6500667-A 25 31-DEC-2002;
FEATURES Location/Qualifiers
source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269234 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.5
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGLYTLAArgLeuProLeuArgSerGlyLeuGLYAlAPr 38
|||||
4 ACTCGACATGGATTGCTGCGCTGACGCGGTGGGTGGCTCC 53
38 OLeuGLYLeu 41
|||||
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR478789

Sequence documentation:
LOCUS AR478789 1302 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 25 from patent US 6699671.
ACCESSION AR478789
VERSION AR478789.1 GI:47237509
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6699671-A 25 02-MAR-2004;
FEATURES Location/Qualifiers
source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478789 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.5
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGLYTLAArgLeuProLeuArgSerGlyLeuGLYAlAPr 38
|||||
4 ACTCGACATGGATTGCTGCGCTGACGCGGTGGGTGGCTCC 53
38 OLeuGLYLeu 41
|||||
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR487355

Sequence documentation:
LOCUS AR487355 1302 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 25 from patent US 6706485.
ACCESSION AR487355
VERSION AR487355.1 GI:47252453
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1302)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 25 16-MAR-2004;
FEATURES Location/Qualifiers

source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487355 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGTATTCTGCTGCGCACTGCGTACGCGTCTGGGTGCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGTCTG 63

Sequence name: rgep2ndb:AR531995

Sequence documentation:
LOCUS AR531995 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6727074.
ACCESSION AR531995
VERSION AR531995.1 GI:53920529
KEYWORDS
SOURCE
ORGANISM
Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof
JOURNAL Patent: US 6727074-A 25 27-APR-2004;
FEATURES Location/Qualifiers
source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531995 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGTATTCTGCTGCGCACTGCGTACGCGTCTGGGTGCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGTCTG 63

Sequence name: rgep2ndb:AR540896

Sequence documentation:
LOCUS AR540896 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6737510.
ACCESSION AR540896
VERSION AR540896.1 GI:53932409

KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof
JOURNAL Patent: US 6737510-A 25 18-MAY-2004;
FEATURES Location/Qualifiers
source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540896 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGTATTCTGCTGCGCACTGCGTACGCGTCTGGGTGCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGTCTG 63

Sequence name: rgep2ndb:AR560106

Sequence documentation:
LOCUS AR560106 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6753163.
ACCESSION AR560106
VERSION AR560106.1 GI:53970473
KEYWORDS
SOURCE
ORGANISM
Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof
JOURNAL Patent: US 6753163-A 25 22-JUN-2004;
FEATURES Location/Qualifiers
source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560106 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGTATTCTGCTGCGCACTGCGTACGCGTCTGGGTGCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGTCTG 63

38 OLeuGlyLeu
|||||
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AX105407

Sequence documentation:
LOCUS AX105407 1302 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 25 from Patent WO0123533.
ACCESSION AX105407
VERSION AX105407.1 GI:13921522
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE
AUTHORS 1 Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
JOURNAL therefor: WO 0123533-A 25 05-APR-2001;
Pharmacia & Upjohn Company (US)
FEATURES
source 1. .1302
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105407 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	37.5
Matching Percent Similarity:	100.00	20	Total length:	20
Total Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Gaps:	0	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGAGCATGGATTGCTGCTGCACCTGCGGTAGCGGTCTGGGTGCTCC 53
38 OLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AX573845

Sequence documentation:
LOCUS AX573845 1302 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 25 from Patent EP1249498.
ACCESSION AX573845
VERSION AX573845.1 GI:27551488
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE
AUTHORS 1 Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
JOURNAL therefor: BP 1249498-A 25 16-OCT-2002;
Pharmacia & Upjohn Company (US)
FEATURES
source 1. .1302
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573845 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	37.5
Matching Percent Similarity:	100.00	20	Total length:	20
Total Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Gaps:	0	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGAGCATGGATTGCTGCTGCACCTGCGGTAGCGGTCTGGGTGCTCC 53
38 OLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AX700454

Sequence documentation:
LOCUS AX700454 1302 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 9 from Patent WO03012089.
ACCESSION AX700454
VERSION AX700454.1 GI:29536243
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE
AUTHORS 1 von,J., Cleasby,A., Bruinzeel,W.D., Maure,S.L., Tickle,I. and
Sharf,A.
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use
thereof
JOURNAL Patent: WO 03012089-A 9 13-FEB-2003;
Aster Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)
FEATURES
source 1. .1302
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700454 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	37.5
Matching Percent Similarity:	100.00	20	Total length:	20
Total Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Gaps:	0	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGAGCATGGATTGCTGCTGCACCTGCGGTAGCGGTCTGGGTGCTCC 53
38 OLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AR224123

Sequence documentation:
LOCUS AR224123 1305 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 52 from patent US 6440698.
ACCESSION AR224123
VERSION AR224123.1 GI:23332783
KEYWORDS
SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6440698-A 52 27-AUG-2002;

FEATURES

Location/Qualifiers

1..1305

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224123 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTGCCGAGCGGCTGGGGGCGCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rgep2ndb:AR269254

Sequence documentation:

LOCUS AR269254 1305 bp DNA linear PAT 10-APR-2003

DEFINITION Sequence 52 from patent US 6500667.

ACCESSION AR269254

VERSION AR269254.1 GI:29700222

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Appartyl protease 2 (App2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 52 31-DEC-2002;

FEATURES

Location/Qualifiers

1..1305

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269254 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTGCCGAGCGGCTGGGGGCGCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rgep2ndb:AR478809

Sequence documentation:

LOCUS AR478809 1305 bp DNA linear PAT 14-MAY-2004

DEFINITION Sequence 52 from patent US 6699671.

ACCESSION AR478809

VERSION AR478809.1 GI:47237529

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6699671-A 52 02-MAR-2004;

FEATURES

Location/Qualifiers

1..1305

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478809 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTGCCGAGCGGCTGGGGGCGCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rgep2ndb:AR487375

Sequence documentation:

LOCUS AR487375 1305 bp DNA linear PAT 14-MAY-2004

DEFINITION Sequence 52 from patent US 6706485.

ACCESSION AR487375

VERSION AR487375.1 GI:47252473

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 52 16-MAR-2004;

FEATURES

Location/Qualifiers

1..1305

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487375 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR532015

Sequence documentation:

LOCUS AR532015 1305 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 52 from patent US 6727074.
ACCESSION AR532015
VERSION AR532015.1 GI:53920549
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor

JOURNAL Patent: US 6727074-A 52 27-APR-2004;
FEATURES Location/Qualifiers

source 1..1305
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR532015 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR540916

Sequence documentation:

LOCUS AR540916 1305 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 52 from patent US 6737510.
ACCESSION AR540916
VERSION AR540916.1 GI:53932429
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof

JOURNAL Patent: US 6737510-A 52 18-MAY-2004;
FEATURES Location/Qualifiers

source 1..1305
/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540916 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR560126

Sequence documentation:

LOCUS AR560126 1305 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 52 from patent US 6753163.
ACCESSION AR560126
VERSION AR560126.1 GI:53970493
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor

JOURNAL Patent: US 6753163-A 52 22-JUN-2004;
FEATURES Location/Qualifiers

source 1..1305
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560126 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AX105434

Sequence documentation:

LOCUS AX105434 1305 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 52 from Patent WO0123533.
ACCESSION AX105434
VERSION AX105434.1 GI:13921542
KEYWORDS
SOURCE synthetic construct

ORGANISM synthetic construct

other sequences; artificial sequences.

REFERENCE

1 Gurney, M. and Bienkowski, M.J.
Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: WO 0123533-A 52 05-APR-2001;

Pharmacia & Upjohn Company (US)

FEATURES

source

1.1305
Location/Qualifiers
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="Hu-Ap2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX105434 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	37.5
Matching Percent Similarity:	20	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGCGCTGCCCTGCGCAGCGCGCTGGGCGCCCC 113
38 oleuGlyLeu 41
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AX573872

Sequence documentation:

LOCUS AX573872 1305 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 52 from Patent EP1249498.
ACCESSION AX573872
VERSION AX573872.1 GI:27551508
KEYWORDS

SOURCE synthetic construct

ORGANISM synthetic construct

other sequences; artificial sequences.

REFERENCE

1 Gurney, M. and Bienkowski, M.J.
Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: EP 1249498-A 52 16-OCT-2002;

Pharmacia & Upjohn Company (US)

FEATURES

source

1.1305
Location/Qualifiers
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="Hu-Ap2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX573872 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	37.5
Matching Percent Similarity:	20	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||

64 ACCCAGCAGCGCATCCGCGCTGCCCTGCGCAGCGCGCTGGGCGCCCC 113

38 oleuGlyLeu 41

114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AB050438

Sequence documentation:

LOCUS AB050438 1333 bp mRNA linear PRI 17-JUL-2001
DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-432,
complete cds.

ACCESSION AB050438

VERSION AB050438.1 GI:13568410

KEYWORDS

SOURCE

Homo sapiens (human)

ORGANISM

REFERENCE

AUTHORS

TITLE

Tanahashi, H. and Tabira, T.
Three novel alternatively spliced isoforms of the human beta-site
amyloid precursor protein cleaving enzyme (BACE) and their effect
on amyloid beta-peptide production
Neurosci. Lett. 307 (1), 9-12 (2001)

JOURNAL

MEIDLIN 21408467

PUBMED

REFERENCE

AUTHORS

TITLE

Tanahashi, H.
Direct Submission

Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of
Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1,
Ogawahigashi, Kodaira, Tokyo 187-8551, Japan
(E-mail: tanahashi@ncmp.go.jp, Tel: 81423412711 (ex. 5163),
Fax: 81423461747)

FEATURES

source

1.1333
Location/Qualifiers

gene

CDS

gene

CDS

gene

CDS

gene

CDS

gene

CDS

gene

CDS

gene

CDS

gene

CDS

gene

CDS

gene

CDS

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||

67 ACCGACGACGCGCTGCGCTGCGGAGCGGCGTGGGGGCGCCCC 116
38 |leuglyleu 41
117 CCTGGGGCTG 126

Sequence name: rsep2ndb:BD235895

Sequence documentation:

LOCUS BD235895 1341 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235895
VERSION BD235895.1 GI:33045665
KEYWORDS JP 2002526081-A/11.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase

JOURNAL Patent: JP 2002526081-A 11 20-AUG-2002;
PHARMACIA AND UPJOHN CO

COMMENT OS Homo sapiens (human)
PN JP 2002526081-A/11
PD 20-AUG-2002
PF 23-SEP-1999 JP 2000574268
PR 24-SEP-1998 US 60/101594
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
HEINRICHSON,
PI LUIS A PARODI, RIOTANG YAN
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC
C12N1/19,
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/15,
G01N33/50//C12N1/21,C12R1/19,C12N15/00,C12N5/00 CC

Alzheimer's disease secretase

Alzheimer's disease secretase

FT source 1. 1341 Location/Qualifiers

FT source 1. 1341 Location/Qualifiers

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FT source 1. 1341 Location/Qualifiers

ACCESSION AR224101
VERSION AR224101.1 GI:23332761
KEYWORDS
SOURCE
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates thereof, and uses thereof

JOURNAL Patent: US 6440698-A 21 27-AUG-2002;
location/Qualifiers

FEATURES 1. 1341
source /organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224101 ..

Alignment segment 1/1: (+)

Quality: 104.00
Matching length: 20
Total length: 37.5
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00

Alignment of: us-10-726-967a-1 x AR224101 ..

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGCTGCGCTGCGGAGCGGCGTGGGGGCGCCCC 92
38 |leuglyleu 41
93 CCTGGGGCTG 102

Sequence name: rsep2ndb:AR269232

Sequence documentation:
LOCUS AR269232 1341 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 21 from patent US 650667.
ACCESSION AR269232
VERSION AR269232.1 GI:29700200
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Aspartyl protease 2 (asp2) antisense oligonucleotides

JOURNAL Patent: US 650667-A 21 31-DEC-2002;
location/Qualifiers

FEATURES 1. 1341
source /organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269232 ..

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGCTGCGCTGCGGAGCGGCGTGGGGGCGCCCC 92

Alignment segment 1/1: (+)

Quality: 104.00
Matching length: 20
Total length: 37.5
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGCTGCGCTGCGGAGCGGCGTGGGGGCGCCCC 92

38 OLeuGlyLeu 41
 |||||
 93 CCGGGGGCTG 102

Sequence name: rgep2ndb:AR478787

Sequence documentation:

LOCUS AR478787 1341 bp DNA linear PAT 14-MAY-2004
 DEFINITION Sequence 21 from patent US 6699671.
 ACCESSION AR478787
 VERSION AR478787.1 GI:47237507
 KEYWORDS

SOURCE
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6699671-A 21 02-MAR-2004;

FEATURES Location/Qualifiers

SOURCE 1..1341
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478787 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrglnHsglyIleArGleuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 43 ACCCAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 92
 38 OLeuGlyLeu 41
 |||||
 93 CCGGGGGCTG 102

Sequence name: rgep2ndb:AR487353

Sequence documentation:

LOCUS AR487353 1341 bp DNA linear PAT 14-MAY-2004
 DEFINITION Sequence 21 from patent US 6706485.
 ACCESSION AR487353
 VERSION AR487353.1 GI:47252451
 KEYWORDS

SOURCE
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 21 16-MAR-2004;

FEATURES Location/Qualifiers

SOURCE 1..1341
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487353 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
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Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrglnHsglyIleArGleuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 43 ACCCAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 92
 38 OLeuGlyLeu 41
 |||||
 93 CCGGGGGCTG 102

Sequence name: rgep2ndb:AR531993

Sequence documentation:

LOCUS AR531993 1341 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 21 from patent US 6727074.
 ACCESSION AR531993
 VERSION AR531993.1 GI:53920527
 KEYWORDS

SOURCE
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6727074-A 21 27-APR-2004;

FEATURES Location/Qualifiers

SOURCE 1..1341
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531993 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrglnHsglyIleArGleuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 43 ACCCAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 92
 38 OLeuGlyLeu 41
 |||||
 93 CCGGGGGCTG 102

Sequence name: rgep2ndb:AR540894

Sequence documentation:

LOCUS AR540894 1341 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 21 from patent US 6737510.
 ACCESSION AR540894
 VERSION AR540894.1 GI:53932407
 KEYWORDS

SOURCE
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6737510-A 21 18-MAY-2004;
FEATURES Location/Qualifiers
Source 1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540894 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 92

38 OLeuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rgep2ndb:AR560104

Sequence documentation:

LOCUS AR560104 1341 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 21 from patent US 6753163.
ACCESSION AR560104
VERSION AR560104.1 GI:53970471

KEYWORDS

SOURCE

ORGANISM

Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor

JOURNAL Patent: US 6753163-A 21 22-JUN-2004;
Location/Qualifiers

FEATURES

Source 1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560104 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 92

38 OLeuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rgep2ndb:AX105403

Sequence documentation:

LOCUS AX105403 1341 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 21 from Patent WO0123533.

ACCESSION AX105403
VERSION AX105403.1 GI:13921520
KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM

REFERENCE 1 Gurney,M. and Bienkowski,M.J.
Alzheimer's disease secretase, app substrates therefor, and uses
therefor

JOURNAL Patent: WO 0123533-A 21 05-APR-2001;
Pharmacia & Upjohn Company (US)

FEATURES

Source

Location/Qualifiers

1..1341
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105403 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 92

38 OLeuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rgep2ndb:AX573841

Sequence documentation:

LOCUS AX573841 1341 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 21 from Patent EP1249498.
ACCESSION AX573841
VERSION AX573841.1 GI:27551486

KEYWORDS

SOURCE

ORGANISM Homo sapiens (human)

REFERENCE 1 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS

TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor

JOURNAL Patent: EP 1249498-A 21 16-OCT-2002;
Pharmacia & Upjohn Company (US)

FEATURES

Source

Location/Qualifiers

1..1341
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573841 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 92
|||||
38 oLeuGlyLeu 41
|||||
93 CCGGGGGCTG 102

Sequence name: rgep2ndb:BD235899

Sequence documentation:

LOCUS BD235899 1362 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235899
VERSION BD235899.1 GI:33045669
KEYWORDS JP 2002526081-A/15.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

REFERENCE 1 (bases 1 to 1362)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Alzheimer's disease secretase
JOURNAL Patent: JP 2002526081-A 15 20-AUG-2002;
PHARMACIA AND UPJOHN CO
COMMENT OS Homo sapiens (human)
PN JP 2002526081-A/15
PD 20-AUG-2002
PF 23-SEP-1999 JP 2000574268
PR 24-SEP-1998 US 60/101594
PI MARK E GURNEY,MICHAEL JEROME BIENKOWSKI,ROBERT LEROY PI
HEINRICHSON,
PI LUIS A PARODI,RIOJANG YAN
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC
C12N1/19,
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/15,
G01N33/50//((C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC
PC Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1362
FT location/Qualifiers
FT 1..1362 /organism='Homo sapiens (human)'.
1..1362 Location/Qualifiers
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

FEATURES
source
1..1362 Location/Qualifiers
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235899 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.5
Matching Percent Similarity:	20	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR224105

Sequence documentation:

LOCUS AR224105 1362 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 29 from patent US 6440698.
ACCESSION AR224105
VERSION AR224105.1 GI:23332765
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6440698-A 29 27-AUG-2002;
FEATURES Location/Qualifiers
source 1..1362
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224105 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.5
Matching Percent Similarity:	20	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR269236

Sequence documentation:

LOCUS AR269236 1362 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 29 from patent US 6500667.
ACCESSION AR269236
VERSION AR269236.1 GI:29700204
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.

TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 29 31-DEC-2002;
FEATURES Location/Qualifiers
source 1..1362
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269236 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.5
Matching Percent Similarity:	20	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCGGCGGCCCC 113
 |||||
 38 GLeuGlyLeu 41
 |||||
 114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR478791

Sequence documentation:

LOCUS AR478791 1362 bp DNA linear PAT 14-MAY-2004
 DEFINITION Sequence 29 from patent US 6699671.
 ACCESSION AR478791
 VERSION AR478791.1 GI:47237511
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
 therefor
 JOURNAL Patent: US 6699671-A 29 02-MAR-2004;
 FEATURES
 source 1..1362
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478791 ..

Alignment segment 1/1: (+)

Quality: 104.00
 Matching length: 20
 Matching Percent Similarity: 100.00
 Total length: 20
 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00
 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCGGCGGCCCC 113
 |||||
 38 GLeuGlyLeu 41
 |||||
 114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR487357

Sequence documentation:

LOCUS AR487357 1362 bp DNA linear PAT 14-MAY-2004
 DEFINITION Sequence 29 from patent US 6706485.
 ACCESSION AR487357
 VERSION AR487357.1 GI:47252455
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Yan,R.
 TITLE Method of identifying agents that inhibit APP processing activity
 JOURNAL Patent: US 6706485-A 29 16-MAR-2004;
 FEATURES
 source 1..1362
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487357 ..

Alignment segment 1/1: (+)
 Quality: 104.00
 Matching length: 20
 Matching Percent Similarity: 100.00
 Total length: 20
 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00
 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCGGCGGCCCC 113
 |||||
 38 GLeuGlyLeu 41
 |||||
 114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR531997

Sequence documentation:

LOCUS AR531997 1362 bp DNA linear PAT 08-OCT-2004.
 DEFINITION Sequence 29 from patent US 6727074.
 ACCESSION AR531997
 VERSION AR531997.1 GI:53920531
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
 therefor
 JOURNAL Patent: US 6727074-A 29 27-APR-2004;
 FEATURES
 source 1..1362
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531997 ..

Alignment segment 1/1: (+)

Quality: 104.00
 Matching length: 20
 Matching Percent Similarity: 100.00
 Total length: 20
 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00
 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCGGCGGCCCC 113
 |||||
 38 GLeuGlyLeu 41
 |||||
 114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR540898

Sequence documentation:

LOCUS AR540898 1362 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 29 from patent US 6737510.
 ACCESSION AR540898
 VERSION AR540898.1 GI:53932411
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

Alignment of: us-10-726-967a-1 x AR540898 ..

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6737510-A 29 18-MAY-2004;
FEATURES Location/Qualifiers
source 1..1362
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540898 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 Thrglnhlglyl1eargleuproleuargserglyleuglylalaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCGCGCGGCTGGGGGGGCGCCCC 113
38 oLeuglyleu
|||||
114 CCGGGGGCTG 41
123

Sequence name: rgep2ndb:AR560108

Sequence documentation:

LOCUS AR560108 1362 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 29 from patent US 6753163.
ACCESSION AR560108
VERSION AR560108.1 GI:53970475
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1362)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6753163-A 29 22-JUN-2004;
FEATURES Location/Qualifiers
source 1..1362
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560108 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 Thrglnhlglyl1eargleuproleuargserglyleuglylalaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCGCGCGGCTGGGGGGGCGCCCC 113
38 oLeuglyleu
|||||
114 CCGGGGGCTG 41
123

Sequence name: rgep2ndb:AX105411

Sequence documentation:

LOCUS AX105411 1362 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 29 from Patent WO0123533.
ACCESSION AX105411
VERSION AX105411.1 GI:13921524
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
REFERENCE 1
AUTHORS Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor
JOURNAL Patent: WO 0123533-A 29 05-APR-2001;
FEATURES Location/Qualifiers
source 1..1362
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105411 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 Thrglnhlglyl1eargleuproleuargserglyleuglylalaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCGCGCGGCTGGGGGGGCGCCCC 113
38 oLeuglyleu
|||||
114 CCGGGGGCTG 41
123

Sequence name: rgep2ndb:AX573849

Sequence documentation:

LOCUS AX573849 1362 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 29 from Patent EPI249498.
ACCESSION AX573849
VERSION AX573849.1 GI:27551490
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
REFERENCE 1
AUTHORS Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor
JOURNAL Patent: EP 1249498-A 29 16-OCT-2002;
FEATURES Location/Qualifiers
source 1..1362
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573849 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rsep2ndb:CQ772944

Sequence documentation:

LOCUS CQ772944 1365 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 9 from Patent WO2004011641.
ACCESSION CQ772944
VERSION CQ772944.1 GI:45126408

KEYWORDS

SOURCE synthetic construct
ORGANISM synthetic construct

other sequences; artificial sequences.

REFERENCE

AUTHORS 1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and
Shah,A.

TITLE Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL mutant and uses thereof

Patent: WO 2004011641-A 9 05-FEB-2004;

Aetex Technology Limited (GB)

FEATURES

source 1. 1365
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE WT R57DEL."

Alignment of: us-10-726-967a-1 x CQ772944 ..

Alignment segment 1/1: (+)

Quality: 104.00 Base: 37.5
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
70 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGCTGGGGGGCGCCCC 119
|||||
38 OleuGlyLeu 41
|||||
120 CCTGGGGCTG 129
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Sequence name: rsep2ndb:CQ772936

Sequence documentation:

LOCUS CQ772936 1368 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 1 from Patent WO2004011641.
ACCESSION CQ772936
VERSION CQ772936.1 GI:45126404

KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE 1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and
AUTHORS

TITLE Shah,A.
Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL mutant and uses thereof

Patent: WO 2004011641-A 1 05-FEB-2004;

Aetex Technology Limited (GB)

Location/Qualifiers

source 1. 1368
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x CQ772936 ..

Alignment segment 1/1: (+)

Quality: 104.00 Base: 37.5
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
70 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGCTGGGGGGCGCCCC 119
|||||
38 OleuGlyLeu 41
|||||
120 CCTGGGGCTG 129
```

Sequence name: rsep2ndb:CQ772940

Sequence documentation:

LOCUS CQ772940 1368 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 5 from Patent WO2004011641.
ACCESSION CQ772940
VERSION CQ772940.1 GI:45126406

KEYWORDS

SOURCE synthetic construct
ORGANISM synthetic construct

other sequences; artificial sequences.

REFERENCE

AUTHORS 1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and
Shah,A.

TITLE Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL mutant and uses thereof

Patent: WO 2004011641-A 5 05-FEB-2004;

Aetex Technology Limited (GB)

FEATURES

source 1. 1368
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE WT R56R57K."

Alignment of: us-10-726-967a-1 x CQ772940 ..

Alignment segment 1/1: (+)

Quality: 104.00 Base: 37.5
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
70 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGCTGGGGGGCGCCCC 119
|||||
38 OleuGlyLeu 41
```

|||||
120 CCTGGGGCTG

129

Sequence name: rgep2ndb:CQ772942

Sequence documentation:

LOCUS CQ772942 1368 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 7 from Patent WO2004011641.
ACCESSION CQ772942
VERSION CQ772942.1 GI:45126407
KEYWORDS
SOURCE
ORGANISM
synthetic construct
other sequences; artificial sequences.

REFERENCE

1 Vuillard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and Shah,A.
Crystal structure of beta-site app-cleaving enzyme (bace)

mutant and uses thereof

JOURNAL Patent: WO 2004011641-A 7 05-FEB-2004;

FEATURES
Astex Technology Limited (GB)

Location/Qualifiers

1..1368

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="DNA sequence coding for the BACE WT R57K."

Alignment of: us-10-726-967a-1 x CQ772942 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity	Length	Matching	Percent Identity	Length
100.00	100.00	20	100.00	100.00	20
Total	Percent Similarity	100.00	Total	Percent Identity	100.00
Gaps:		0			

Alignment:

22 ThrGlnHISGlyTleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCGACGACGGCATCCGCTGCCCTGGCGACGGCTGGGGGGCCCC 119
|||||
38 olenglyleu 41
|||||
120 CCTGGGGCTG 129

Sequence name: rgep2ndb:CQ772948

Sequence documentation:

LOCUS CQ772948 1368 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 13 from Patent WO2004011641.
ACCESSION CQ772948
VERSION CQ772948.1 GI:45126410
KEYWORDS
SOURCE
ORGANISM
synthetic construct
other sequences; artificial sequences.

REFERENCE

1 Vuillard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and Shah,A.
Crystal structure of beta-site app-cleaving enzyme (bace)

mutant and uses thereof

JOURNAL Patent: WO 2004011641-A 13 05-FEB-2004;

FEATURES
Astex Technology Limited (GB)

Location/Qualifiers

1..1368

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="DNA sequence coding for the BACE N->Q R56KR57K no His."

Alignment of: us-10-726-967a-1 x CQ772948 ..
Alignment segment 1/1: (+)

Matching	Percent Similarity	Length	Matching	Percent Identity	Length
100.00	100.00	20	100.00	100.00	20
Total	Percent Similarity	100.00	Total	Percent Identity	100.00
Gaps:		0			

Alignment:

22 ThrGlnHISGlyTleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCGACGACGGCATCCGCTGCCCTGGCGACGGCTGGGGGGCCCC 119
|||||
38 olenglyleu 41
|||||
120 CCTGGGGCTG 129

Sequence name: rgep2ndb:AF338817

Sequence documentation:

LOCUS AF338817 1374 bp mRNA linear PRI 21-MAY-2002
DEFINITION Homo sapiens beta-site APP cleaving enzyme type C mRNA, complete cds.

ACCESSION

AF338817

VERSION

AF338817.1 GI:13699247

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

MEDLINE

PUBMED

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

1..1374
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/cbase_type="exocrine pancreas"
1..1374
/note="BACE-1c; potential splice variant of beta-site APP cleaving enzyme (BACE)"
/product="beta-site APP cleaving enzyme type C"
/protein_id="AAK38375.1"
/translation="MAQALPWLTLMMGAVLPAGHTGRIPLRSGAGAPLRLRP
RETDEPERPERGSGFVEMVDNLKSGSGQGVYVMTQSPQTNIIVDTSSNPAVG
AAPFLHRYVROSLSTYRDLRKGVPVYVPGKMBGLGTDLPDDSLPEPPDSLVVG
THVNLPLSLICGAGPLNOSSEVIVASGSMITGGIDHSILYTGSLMTPTIRREYEV
IIVAVEINGDPLRNDCKERYNDKSTIVSGTINLRLPKVFEAAVAKSIKAASTKSPD
GFVWISQVQAGITPWNIPVVISLVMGEVTVNQSRITILPQOYLRPVEDVATSD
DCYKFAISQSTGTVMGAVIMEGFVYVDRARKKIGFAVSCVHDFRFAAVGSPV
TLMDKCGYNIPQTDSTIMTIAVYMAICALPWLPLCLMVQCRCLRCLRQHDPA
DLSILK"

CDS

Alignment of: us-10-726-967a-1 x AF338817 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:BD235896

Sequence documentation:

LOCUS BD235896 1380 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235896
VERSION BD235896.1 GI:33045666
KEYWORDS JP 2002526081-A/12.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and
Van,R.
Alzheimer's disease secretase
Patent: JP 2002526081-A 12 20-AUG-2002;
PHARMACIA AND UPJOHN CO
OS Homo sapiens (human)
PN JP 2002526081-A/12
PD 20-AUG-2002
PF 23-SEP-1999 JP 2000574268
PR 24-SEP-1998 US 60/101594
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
HEINRIKSON,
PI LUIS A PARODI, RIOIANG VAN
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC
C12N1/19,
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
15,
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1380
FT Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

FEATURES
source 1..1380
Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

COMMENT

PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
15,
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1380
FT Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235896 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

82 ACCGACGACGGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 131

38 OleuGlyLeu 41
|||||
132 CCTGGGGGCTG 141

Sequence name: rgep2ndb:BD235900

Sequence documentation:

LOCUS BD235900 1380 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235900
VERSION BD235900.1 GI:33045670
KEYWORDS JP 2002526081-A/16.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and
Van,R.
Alzheimer's disease secretase
Patent: JP 2002526081-A 16 20-AUG-2002;
PHARMACIA AND UPJOHN CO
OS Homo sapiens (human)
PN JP 2002526081-A/16
PD 20-AUG-2002 JP 2000574268
PF 23-SEP-1999 JP 2000574268
PR 24-SEP-1998 US 60/101594
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
HEINRIKSON,
PI LUIS A PARODI, RIOIANG VAN
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC
C12N1/19,
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
15,
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1380
FT Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

FEATURES
source 1..1380
Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
15,
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1380
FT Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
15,
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1380
FT Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
15,
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1380
FT Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

FEATURES
source 1..1380
Location/Qualifiers
1..1380
/organism="Homo sapiens (human)"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235900 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR224102

Sequence documentation:

LOCUS AR224102 1380 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 23 from patent US 6440698.

ACCESSION AR224102
VERSION AR224102.1 GI:23332762

KEYWORDS
SOURCE Unknown.

ORGANISM

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6440698-A 23 27-AUG-2002;

FEATURES Location/Qualifiers

source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224102 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

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22 Thrglnhlglytleargleuproleuargserglyleuglygla1a1aPr 38
|||||
82 ACCCAGCAGCGCATCCGGCTGCGCGCAGCGGCTGGGGGCGCCCC 131
|||||
38 oleuglyleu 41
|||||
132 CCTGGGGCTG 141
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Sequence name: rsep2ndb:AR224106

Sequence documentation:

LOCUS AR224106 1380 bp DNA linear PAT 26-SEP-2002

DEFINITION Sequence 31 from patent US 6440698.

ACCESSION AR224106

VERSION AR224106.1 GI:23332766

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6440698-A 31 27-AUG-2002;

FEATURES Location/Qualifiers

source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224106 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

22 Thrglnhlglytleargleuproleuargserglyleuglygla1a1aPr 38
|||||

64 ACCCAGCAGCGCATCCGGCTGCGCGCAGCGGCTGGGGGCGCCCC 113

38 oleuglyleu 41

114 CCTGGGGCTG 123

Sequence name: rsep2ndb:AR269233

Sequence documentation:

LOCUS AR269233 1380 bp DNA linear PAT 10-APR-2003

DEFINITION Sequence 23 from patent US 6500667.

ACCESSION AR269233

VERSION AR269233.1 GI:29700201

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 23 31-DEC-2002;

FEATURES Location/Qualifiers

source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269233 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Sequence name: rsep2ndb:AR269237

Sequence documentation:

LOCUS AR269237 1380 bp DNA linear PAT 10-APR-2003

DEFINITION Sequence 31 from patent US 6500667.

ACCESSION AR269237

VERSION AR269237.1 GI:29700205

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 31 31-DEC-2002;

FEATURES Location/Qualifiers

source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269237 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
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Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaAPR 38
|||||
64 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR478788

Sequence documentation:

LOCUS AR478788 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 23 from patent US 6699671.
ACCESSION AR478788
VERSION AR478788.1 GI:47237508

KEYWORDS

SOURCE

ORGANISM

Unclassified.

REFERENCE

AUTHORS 1 (bases 1 to 1380)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6699671-A 23 02-MAR-2004;

FEATURES Location/Qualifiers

source 1..1380

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478788 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaAPR 38
|||||
82 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 131
|||||
38 OLeuGlyLeu 41
|||||
132 CCTGGGGGCTG 141

Sequence name: rgep2ndb:AR478792

Sequence documentation:

LOCUS AR478792 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 31 from patent US 6699671.
ACCESSION AR478792
VERSION AR478792.1 GI:47237512

KEYWORDS

SOURCE

ORGANISM

Unclassified.

REFERENCE

AUTHORS 1 (bases 1 to 1380)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

therefor

JOURNAL Patent: US 6699671-A 31 02-MAR-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478792 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaAPR 38
|||||
64 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR487354

Sequence documentation:

LOCUS AR487354 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 23 from patent US 6706485.
ACCESSION AR487354
VERSION AR487354.1 GI:47252452

KEYWORDS

SOURCE

ORGANISM

Unclassified.

REFERENCE

AUTHORS 1 (bases 1 to 1380)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 23 16-MAR-2004;

FEATURES Location/Qualifiers

source 1..1380

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487354 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaAPR 38
|||||
82 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 131
|||||
38 OLeuGlyLeu 41
|||||
132 CCTGGGGGCTG 141

Sequence name: rgep2ndb:AR487358

Sequence documentation:

LOCUS AR487358 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 31 from patent US 6706485.
ACCESSION AR487358

VERSION AR487358.1 GI:47252456
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.
 REFERENCE 1 (bases 1 to 1380)
 AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
 TITLE Method of identifying agents that inhibit APP processing activity
 JOURNAL Patent: US 6706485-A 31 16-MAR-2004;
 FEATURES Location/Qualifiers
 source 1..1380
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487358 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	37.6
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CCTGGGGCGCTG 123

```

Sequence name: rgep2ndb:AR531994

Sequence documentation:

LOCUS AR531994 1380 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 23 from patent US 6727074.
 ACCESSION AR531994
 VERSION AR531994.1 GI:53920528

KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.
 REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6727074-A 23 27-APR-2004;

FEATURES

source 1..1380
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531994 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	37.6
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
82 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 131

```

```

38 OLeuGlyLeu
|||||
132 CCTGGGGCGCTG 141

```

Sequence name: rgep2ndb:AR531998

Sequence documentation:

LOCUS AR531998 1380 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 31 from patent US 6727074.
 ACCESSION AR531998
 VERSION AR531998.1 GI:53920532

KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6727074-A 31 27-APR-2004;

FEATURES

source 1..1380
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531998 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	37.6
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CCTGGGGCGCTG 123

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Sequence name: rgep2ndb:AR540895

Sequence documentation:

LOCUS AR540895 1380 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 23 from patent US 6737510.
 ACCESSION AR540895
 VERSION AR540895.1 GI:53932408

KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6737510-A 23 18-MAY-2004;

FEATURES

source 1..1380
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540895 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
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Matching length: 20 Total length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 82 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGCCCC 131
 38 OLeuGlyLeu
 |||||
 132 CCTGGGGCTG 141

Sequence name: rgep2ndb:AR540899

Sequence documentation:

LOCUS AR540899 1380 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 31 from patent US 6737510.
 ACCESSION AR540899
 VERSION AR540899.1 GI:53932412
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)
 AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
 thereof
 JOURNAL Patent: US 6737510-A 31 18-MAY-2004;
 FEATURES Location/Qualifiers
 source 1..1380
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540899 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
 Matching length: 20 Total length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGCCCC 113
 38 OLeuGlyLeu
 |||||
 114 CCTGGGGCTG 123

Sequence name: rgep2ndb:AR560105

Sequence documentation:

LOCUS AR560105 1380 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 23 from patent US 6753163.
 ACCESSION AR560105
 VERSION AR560105.1 GI:53970472
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

Sequence documentation:

REFERENCE 1 (bases 1 to 1380)
 AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
 thereof

JOURNAL Patent: US 6753163-A 23 22-JUN-2004;
 FEATURES Location/Qualifiers
 "source 1..1380
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560105 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
 Matching length: 20 Total length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 82 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGCCCC 131
 38 OLeuGlyLeu
 |||||
 132 CCTGGGGCTG 141

Sequence name: rgep2ndb:AR560109

Sequence documentation:

LOCUS AR560109 1380 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 31 from patent US 6753163.
 ACCESSION AR560109
 VERSION AR560109.1 GI:53970476
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.

Sequence documentation:

REFERENCE 1 (bases 1 to 1380)
 AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Yan,R.
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
 thereof

JOURNAL Patent: US 6753163-A 31 22-JUN-2004;
 FEATURES Location/Qualifiers
 source 1..1380
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560109 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6
 Matching length: 20 Total length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGCCCC 113
 38 OLeuGlyLeu
 |||||
 114 CCTGGGGCTG 123

Sequence name: rgep2ndb:AX105405

Sequence documentation:

LOCUS AX105405 1380 bp DNA linear PAT 30-APR-2001
 DEFINITION Sequence 23 from Patent WO0123533.

ACCESSION AX105405
VERSION AX105405.1 GI:13921521

KEYWORDS
SOURCE Homo sapiens (human)

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Gurney, M. and Bienkowski, M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: WO 0123533-A 23 05-APR-2001;
Pharmacia & Upjohn Company (US)

FEATURES
source 1..1380
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105405 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
82 ACCGACGACGCGATCCGGCTGCCCTGCCACGCGCGCTGGGGGGCCCC 131
|||||
38 OLeuGlyLeu
|||||
132 CCTGGGGGCTG
|||||
141

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Sequence name: rgep2ndb:AX105413

Sequence documentation:

LOCUS AX105413 1380 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 31 from Patent WO0123533.
ACCESSION AX105413
VERSION AX105413.1 GI:13921525

KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Gurney, M. and Bienkowski, M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: WO 0123533-A 31 05-APR-2001;
Pharmacia & Upjohn Company (US)

FEATURES
source 1..1380
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105413 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCACGCGCGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCTGGGGGCTG
|||||
123

```

Sequence name: rgep2ndb:AX573843

Sequence documentation:

LOCUS AX573843 1380 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 23 from Patent EP1249498.
ACCESSION AX573843
VERSION AX573843.1 GI:27551487

KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Gurney, M. and Bienkowski, M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: EP 1249498-A 23 16-OCT-2002;
PHARMACIA & UPJOHN COMPANY (US)

FEATURES
source 1..1380
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573843 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
82 ACCGACGACGCGATCCGGCTGCCCTGCCACGCGCGCTGGGGGGCCCC 131
|||||
38 OLeuGlyLeu
|||||
132 CCTGGGGGCTG
|||||
141

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Sequence name: rgep2ndb:AX573851

Sequence documentation:

LOCUS AX573851 1380 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 31 from Patent EP1249498.
ACCESSION AX573851
VERSION AX573851.1 GI:27551491

KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Gurney, M. and Bienkowski, M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: EP 1249498-A 31 16-OCT-2002;
PHARMACIA & UPJOHN COMPANY (US)

FEATURES
Location/Qualifiers

source

1. 1380
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573851 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCGGACGCGGCTGGGGGGGCGCCC 113
38 OleuGlyLeu
|||||
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:CQ772952

Sequence documentation:

LOCUS CQ772952 1383 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 17 from Patent WO2004011641.
ACCESSION CQ772952
VERSION CQ772952.1 GI:45126412

KEYWORDS

SOURCE

ORGANISM

synthetic construct
other sequences; artificial sequences.

REFERENCE

1
Vuillard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and
Shah,A.

TITLE

Crystal structure of beta-site app-cleaving enzyme (bace)

mutant and uses thereof

Patent: WO 2004011641-A 17 05-FEB-2004;

JOURNAL

Aster Technology Limited (GB)

FEATURES

Location/Qualifiers

1. 1383

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="DNA sequence coding for the BACE N->Q R57DEL."

Alignment of: us-10-726-967a-1 x CQ772952 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCGACGACGGCATCCGGCTGCGGACGCGGCTGGGGGGGCGCCC 119
38 OleuGlyLeu
|||||
120 CCGGGGGCTG 129

Sequence name: rgep2ndb:CQ772938

Sequence documentation:

LOCUS CQ772938 1386 bp DNA linear PAT 04-MAR-2004

DEFINITION Sequence 3 from Patent WO2004011641.

ACCESSION CQ772938

VERSION CQ772938.1 GI:45126405

KEYWORDS

SOURCE

ORGANISM

synthetic construct

other sequences; artificial sequences.

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

1. 1386

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="DNA sequence coding for the BACE protein, BACE
N->Q."

Alignment of: us-10-726-967a-1 x CQ772938 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCGACGACGGCATCCGGCTGCGGACGCGGCTGGGGGGGCGCCC 119
38 OleuGlyLeu
|||||
120 CCGGGGGCTG 129

Sequence name: rgep2ndb:CQ772946

Sequence documentation:

LOCUS CQ772946 1386 bp DNA linear PAT 04-MAR-2004

DEFINITION Sequence 11 from Patent WO2004011641.

ACCESSION CQ772946

VERSION CQ772946.1 GI:45126409

KEYWORDS

SOURCE

ORGANISM

synthetic construct

other sequences; artificial sequences.

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

1. 1386

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="DNA sequence coding for the BACE N->Q R56KR57K."

Alignment of: us-10-726-967a-1 x CQ772946 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 37.6

Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrglnHlglylleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
70 ACCCAGCAGCGCATCCGCTGCGCCCTGCGCAGCGCGCTGGGGGGCGCCCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CCGGGGGCTG 129

Sequence name: rgep2ndb:CQ772950

Sequence documentation:

LOCUS CQ772950 1386 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 15 from Patent WO2004011641.
ACCESSION CQ772950
VERSION CQ772950.1 GI:45126411
KEYWORDS

SOURCE
ORGANISM
synthetic construct
synthetic construct
other sequences; artificial sequences.

REFERENCE

1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and Shah,A.
CRYSTAL structure of beta-site app-cleaving enzyme (bace)
mutant:and uses thereof
Patent: WO 2004011641-A 15 05-FEB-2004;
JOURNAL Aetex Technology Limited (GB)

FEATURES

1..1386
location/Qualifiers
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE N->Q R57K."

Alignment of: us-10-726-967a-1 x CQ772950 ..

Alignment segment 1/1: (+)

Matching length: 104.00 Total length: 37.6
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrglnHlglylleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
70 ACCCAGCAGCGCATCCGCTGCGCCCTGCGCAGCGCGCTGGGGGGCGCCCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CCGGGGGCTG 129

Sequence name: rgep2ndb:AB050437

Sequence documentation:

LOCUS AB050437 1408 bp mRNA linear PRI 17-JUL-2001
DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-457,
complete cds.
ACCESSION AB050437
VERSION AB050437.1 GI:13568408
KEYWORDS

SOURCE
ORGANISM
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.

REFERENCE

1 Tanahashi,H. and Tabira,T.
AUTHORS
TITLE Three novel alternatively spliced isoforms of the human beta-site
amyloid precursor protein cleaving enzyme (BACE) and their effect
on amyloid beta-peptide production
JOURNAL Neurosci. Lett. 307 (1), 9-12 (2001)
MEDLINE 21408467
PUBMED 11516562

REFERENCE

2 (bases 1 to 1408)
AUTHORS Tanahashi,H.

JOURNAL

Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of
Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1,
Ogawaigashi, Kodaira, Tokyo 187-8551, Japan
(E-mail:tanahash@ncmp.go.jp, Tel:81423412711(ex.5163),
Fax:81423461747)

FEATURES

1..1408
Location/Qualifiers
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/cfeature_type="Brain"
1..1408
/gene="BACE"
4..1377
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/note="BACE"
/note="alternative splicing isoform"
/codon_start=1
/product="beta-site APP cleaving enzyme I-457"
/protein_id="BAB40932.1"
/db_xref="GI:13568409"

CDS

Gene

1..1408
/translation="MAQALPMLLMGAGVLPAGHTQGTIRLPRLSGIGAGPLGRPL
RETDEPREPRGRGSFEMVDNLRKSGQGITVENTGSPQTNILVDTSSNPVAG
AAHPFLRRYIQRLSTYRDLRGVVPTQKMEBSLGTDLDPDSLPPFDSLAVG
TAPNPLFSLQCGAGFPLNOSVLAIVGSMIIGIDHSLYTGSLMTPIRERYEV
IIVRVEINGODLKDCKEYNDKSIIVSGTNNLRPKVFAAVKSIKAESTKFPD
GFWLGEOLVQWQAGTTPWNIIPVIVSLVIGERTVQSPRTITLPOOYRPPVDVATSD
DCYKPAISOSTGTGAVIMEGPPVVDPRARKTIGPVAVSCYHVDERTAAVGPV
TLDMDCCGYNIPQDDESTLTATAYMAICALPMLPLCLMVCQNRCLRCLQCHDDFA
DDISLRK"

Alignment of: us-10-726-967a-1 x AB050437 ..

Alignment segment 1/1: (+)

Matching length: 104.00 Total length: 37.6
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrglnHlglylleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
67 ACCCAGCAGCGCATCCGCTGCGCCCTGCGCAGCGCGCTGGGGGGCGCCCC 116
|||||
38 oleuGlyLeu 41
|||||
117 CCGGGGGCTG 126

Sequence name: rgep2ndb:AF338816

Sequence documentation:

LOCUS AF338816 1431 bp mRNA linear PRI 21-MAY-2002
DEFINITION Homo sapiens beta-site APP cleaving enzyme type B mRNA, complete
cds.
ACCESSION AF338816
VERSION AF338816.1 GI:13699245
KEYWORDS

SOURCE
ORGANISM
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.

Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
1 (bases 1 to 1431)
Ehehelt,R., Michel,B., De Pietri Tonelli,D., Zacchetti,D.,
Simons,K., and Keller,P.
Splice variants of the beta-site APP-cleaving enzyme BACE1 in human
brain and pancreas
JOURNAL
Biochem. Biophys. Res. Commun. 293 (1), 30-37 (2002)
MEDLINE
22049977
PUBMED
12054559
2 (bases 1 to 1431)
REFERENCE
Michel,B., De Pietri Tonelli,D., Zacchetti,D. and Keller,P.
AUTHORS
Direct Submission
JOURNAL
Submitted (19-JAN-2001) Max Planck Institute of Molecular Cell
Biology and Genetics, Pflzenhauserstr. 108, Dresden D-01307, Germany
FEATURES
source
location/Qualifiers
1..1431
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/tissue_type="brain; exocrine pancreas"
1..1431
/note="BACE-1B; potential splice variant of beta-site APP
cleaving enzyme (BACE)"
/codon_start=1
/product="beta-site APP cleaving enzyme type B"
/protein_id="AAK38374.1"
/db_xref="GI:13569246"
/translation="MAQALPWLIMMGAGVLPAGHTQHGIRLPLRSGLGAPLGLRLP
REDEBPEBGRGSEVEMVDNLKRGSGQYVEMTVGSPQTLNLLVDGSSNFAVG
AAPPLHRYOQLSTYDLKRGVVPYTOGMEGLGDLVSI.PHGPNVVRANI
AATGSDKPFINSNMEGILGLAVAIARLCGAGPPLNOSVLAASVSGSMIIGIDHS
LYTGS.MYPIRREMYEVILYRVEINGDILKMDCKEYNDKSIYVSGTNLALPKV
FEAAVKSIRKASTETKRPDGFVLGBOVLCMAQTTPNIFPVISLTMGEVNTQSFRI
TLPQGYLRVEDVATSDQCYFAISQSGTGMVAGVMEGFVVPDRARRKIGFAY
SACHVDEFRITAVEGPFVTLDMEDCGYNI.PQDESLMTMTIAYVMAICALFMLPLCL
MVCQWRCLRCLRQHDHDFADISILK"

Alignment of: us-10-726-967a-1 x AAK38816 ..
Alignment segment 1/1: (+)
Quality: 104.00
Matching length: 20
Total length: 37.6
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Total Percent Similarity: 100.00
Gaps: 0

Alignment:
22 ThrGNIHIGIYIIeArGLeuProLeuArgSerGlyLeuGlyYAlAPr 38
|||||
64 ACCGACGACGGCATCCGCTGCGCGACGGCTGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGCGCTG 123

Sequence name: rgep2ndb:AB050436
Sequence documentation:
LOCUS AB050436 1465 bp mRNA linear PRI 17-JUL-2001
DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-476,
complete cde.
ACCESSION AB050436
VERSION AB050436.1 GI:13568406
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
REFERENCE
1 Tanahashi,H. and Tabira,T.
AUTHORS
Three novel alternatively spliced isoforms of the human beta-site

amyloid precursor protein cleaving enzyme (BACE) and their effect
on amyloid beta-peptide production
JOURNAL
Neurosci. Lett. 307 (1), 9-12 (2001)
MEDLINE
21408467
PUBMED
11516562
2 (bases 1 to 1465)
REFERENCE
Tanahashi,H.
AUTHORS
Direct Submission
JOURNAL
Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of
Neuroscience, Division of Demyelinating Disease and Aging, 4-1-1,
Ogawabashi, Kodaira, Tokyo 187-8551, Japan
E-mail:tanahash@ncnp.go.jp, Tel:81423412711(ex.5163),
Fax:81423461747
FEATURES
source
location/Qualifiers
1..1465
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/tissue_type="brain"
1..1465
/gene="BACE"
4..1434
/gene="BACE"
/note="alternative splicing isoform"
/codon_start=1
/product="beta-site APP cleaving enzyme I-476"
/protein_id="BAB40931.1"
/db_xref="GI:13568407"
/translation="MAQALPWLIMMGAGVLPAGHTQHGIRLPLRSGLGAPLGLRLP
REDEBPEBGRGSEVEMVDNLKRGSGQYVEMTVGSPQTLNLLVDGSSNFAVG
AAPPLHRYOQLSTYDLKRGVVPYTOGMEGLGDLVSI.PHGPNVVRANI
AATGSDKPFINSNMEGILGLAVAIARLCGAGPPLNOSVLAASVSGSMIIGIDHS
LYTGS.MYPIRREMYEVILYRVEINGDILKMDCKEYNDKSIYVSGTNLALPKV
FEAAVKSIRKASTETKRPDGFVLGBOVLCMAQTTPNIFPVISLTMGEVNTQSFRI
TLPQGYLRVEDVATSDQCYFAISQSGTGMVAGVMEGFVVPDRARRKIGFAY
SACHVDEFRITAVEGPFVTLDMEDCGYNI.PQDESLMTMTIAYVMAICALFMLPLCL
MVCQWRCLRCLRQHDHDFADISILK"

Alignment of: us-10-726-967a-1 x AB050436 ..
Alignment segment 1/1: (+)
Quality: 104.00
Matching length: 20
Total length: 37.6
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Total Percent Similarity: 100.00
Gaps: 0

Alignment:
22 ThrGNIHIGIYIIeArGLeuProLeuArgSerGlyLeuGlyYAlAPr 38
|||||
67 ACCGACGACGGCATCCGCTGCGCGACGGCTGGGGGCGCCCC 116
|||||
38 OLeuGlyLeu 41
|||||
117 CTGGGCGCTG 126

Sequence name: rgep2ndb:AX700449
Sequence documentation:
LOCUS AX700449 1470 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 4 from Patent WO03012089.
ACCESSION AX700449
VERSION AX700449.1 GI:29536240
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
REFERENCE
1 Yon,J., Cleasby,A., Bruinzeel,W.D., Measure,S.L., Tickle,I. and
AUTHORS
Sharff,A.

TITLE	Crystal structure of beta-site app cleaving enzyme (bace) and use thereof
JOURNAL	Patent: WO 03012089-A 4 13-FEB-2003; Astell Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)
FEATURES	Location/Qualifiers
source	1..1470

Alignment of: us-10-726-967a-1 x AX700445

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Percent Similarity:	100.00	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThGlnHisGlyLeuArgLeuProLeuArgSerGlyLeuGlyValApr 38
154 ACCACACAGCGGATCCGGCTGCTCTGGCGCACGGGCTCGGAGAGACTCC 20
38 oleuGlyLeu 41
204 ACTGGGACTG 211

Sequence name: rgep2ndb:AR404163

Sequence documentation:

LOCUS AR040163 1503 bp DNA linear PAT 18-DEC-2003
DEFINITION Sequence 1 from patent US 6627739.
ACCESSION AR040163
VERSION AR040163.1 GI:40152203
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

Alignment of: us-10-726-967a-1 x AR404163 .

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching Length:	20	Total Length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22	ThrglnhLsglyLleArgLeuProleuNrgserGlyLeuGlyYAlAPr	38
23		39
24		40
64	ACCACGACACGGATCCGGCTGCCCTCTGGCGACGGGCTGGGGGGGGCCCC	112
38	oleuGlyLeu	41
114	CCTGGGGGCTG	123

Sequence name: rgep2ndb:AX700448

Sequence documentation:

LOCUS	AX700448	1506 bp	DNA
DEFINITION	Sequence 3 from Patent WO03012089.		linear
ACCESSION	AX700448		
VERSION	AX700448.1	GI:29536239	
KEYWORDS			
SOURCE	Homo sapiens (human)		

REFERENCE

3434

FORMA**FEA TYPE**

Source:

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/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

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Alignment of: us-10-726-967a-1 x AX700448 .

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22	ThrglnnsglylIeargleuProleuhdrgerglyuGIYV1Apr	38
64	ACCAGACAGGSCATCGGCTCCCTCGCGACGGCCTGAGGAGGCGCCCC	112
38	oleuglyleu	41
114	CCTGAGGCGTG	122

Sequence name: rgep2ndb:AX823518

Sequence documentation:

LOCUS	1506 bp	DNA	1 linear	PAT 11-DEC-2003
DEFINITION	AX823518			
SEQUENCE	8 from Patent EP1340424.			
ACCESSION	AX823518			
VERSION	AX823518.1			
KEYWORDS	GI:39749972			
SOURCE	.			
	Homo sapiens (human)			

REFERENCE

1 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

TITLE Double transgenic animal model for alzheimer's disease
JOURNAL Patent: EP 1340424-A 8 03-SEP-2003;
F. HOFFMANN-LA ROCHE AG (CH)

FEATURES

Source

Alignment of: us-10-726-967a-1 x AX823518

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00

Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGGATCCGACTGCGACGCGAGCTGGAGGTGCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 TCTGGGACTG 123
```

Sequence name: rgep2ndb:AF204943

Sequence documentation:

LOCUS AF204943 1506 bp mRNA linear PRI 19-JAN-2000
DEFINITION Homo sapiens transmembrane aspartic proteinase Asp 2 (BACE1) mRNA,
complete cds.

ACCESSION AF204943 GI:6715309

VERSION AF204943.1 GI:6715309

KEYWORDS Homo sapiens (human)

SOURCE Homo sapiens

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1506)

AUTHORS Huseain, I., Powell, D., Howlett, D.R., Tew, D.G., Meek, T.D.,
Chapman, C., Gloger, I.S., Murphy, K.E., Southern, C.D., Ryan, D.M.,
Smith, T.S., Simmons, D.L., Walsh, F.S., Dingwall, C. and Christie, G.TITLE Identification of a novel aspartic protease (Asp 2) as
beta-secretase

JOURNAL Mol. Cell. Neurosci. 14 (6), 419-427 (1999)

MEDLINE 20030166

PUBMED 10656250

REFERENCE 2 (bases 1 to 1506)

AUTHORS Powell, D.J., Chapman, C.G. and Murphy, K.

TITLE Direct Submission

JOURNAL Submitted (15-NOV-1999) SmithKline Beecham Pharmaceuticals, 709
Swedeland Rd., King of Prussia, PA 19046, USA

FEATURES

source

1. .1506

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

1. .1506

/gene="BACE1"

1. .1506

/gene="BACE1"

/note="beta-site APP processing enzyme"

/codon_start=1

/product="transmembrane aspartic proteinase Asp 2"

/protein_id="AF26367.1"

/translation="MAQALPMILIMMGAGVLPAHGTQHGIRLPLRSGIGGAPRGLP
RENDERPERGRGRGFTYEMDNRKSGGQYTYEMTGPPTLINTLVDTGSSNPAVG
AAHPPLHRYQRQLSTYRDLKRGVPTQKMGSELDLVSIPHGNNVVRANI
AALTBSDFPINGSNMGILGLVABIRADDLLEPPDSLVKQTHVPMNLSQLCGA
GFLNDSSEVAVSGSMIGIDHSLYTSLATPIRREMYEVIIIVRVEINGQDLKM
DCKEYVDSIVSGTNNLPLPKVPEAAVKSIIKAASSTKPFDFGLGOLQWQAG
TPPMTLPVLSLIGEVNOSFRITLIPQOYRVPDVATSDCCYKKAISOSGT
VMGAVMEGTYVFPDARKRIGPVAASCHVDFRPAVAGPVTYDMECCGNITQT
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Alignment of: us-10-726-967a-1 x AF204943

Alignment segment 1/1: (+)

Quality: 104.00
Matching length: 20
Total length: 37.6
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Gaps: 0

Alignment:

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22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGGATCCGACTGCGACGCGGCTGGAGGTGCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTTGGGCTG 123
```

Sequence name: rgep2ndb:BD103723

Sequence documentation:

LOCUS BD103723 1527 bp DNA linear PAT 27-AUG-2002
DEFINITION Beta secretase inhibitor.
ACCESSION BD103723
VERSION BD103723.1 GI:22649297
KEYWORDS WO 0187293-A/6.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1527)

AUTHORS Miyamoto, M., Matsui, J., Fukumoto, H. and Tarui, N.

TITLE Beta secretase inhibitor

JOURNAL Patent: WO 0187293-A 6 22-NOV-2001.
TAKEDA CHEMICAL INDUSTRIES LTD, MASAOKI MIYAMOTO, JUNJI MATSUI,
HIROAKI FUKUMOTO, NAOKI TARUI

COMMENT OS Homo sapiens (human)

PN WO 0187293-A/6

PD 22-NOV-2001

PF 18-MAY-2001

PR 19-MAY-2000

PI MASAOKI MIYAMOTO, JUNJI MATSUI, HIROAKI FUKUMOTO, NAOKI TARUI

PC A61K31/135,A61K31/14,A61K31/165,A61K31/40,A61K31/4453,A61K31/PC

CC A61P43/00,A61P25/00,A61P25/16,A61P25/28

FT Beta secretase inhibitor

FT Key

FT source

1. .1527

/organism="Homo sapiens"

/mol_type="genomic DNA"

/db_xref="taxon:9606"

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

Alignment of: us-10-726-967a-1 x BD103723

Alignment segment 1/1: (+)

Quality: 104.00
Matching length: 20
Total length: 37.6
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Gaps: 0

ACCESSION BD235887
 KEYWORDS BD235887.1 GI:33045657
 SOURCE JP 2002526081-A/3.
 ORGANISM Homo sapiens (human)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 1 (bases 1 to 1977)
 Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
 Alzheimers disease secretase
 Patent: JP 2002526081-A 3 20-AUG-2002;
 PHARMACIA AND UPJOHN CO
 OS Homo sapiens (human)
 PN JP 2002526081-A/3
 PD 20-AUG-2002
 PF 23-SEP-1999 JP 2000574268
 PI 24-SEP-1998 US 60/101594
 PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
 HEINRICHSON,
 PI LUIS A PARODI, RIOTANG YAN
 PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC
 C12N1/19,
 PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/15,
 G01N33/50//C12N1/21,C12R1:19,C12N15/00,C12N5/00 CC
 PC Alzheimer's disease secretase
 PH Alzheimer's disease secretase
 FT key Location/Qualifiers
 FT source 1..1977
 /organism="Homo sapiens (human)"
 1..1977
 /organism="Homo sapiens"
 /mol_type="genomic DNA"
 /db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235887 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:
 22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGCGCCCC 113
 |||||
 38 OleuGlyLeu 41
 |||||
 114 CTTGGGGGCTG 123

Sequence name: rgep2ndb:AR224094

Sequence documentation:
 LOCUS AR224094 1977 bp DNA linear PAT 26-SEP-2002
 DEFINITION Sequence 5 from patent US 6440698.
 ACCESSION AR224094
 VERSION AR224094.1 GI:23332754
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.
 Unclassified.
 1 (bases 1 to 1977)
 Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
 Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6440698-A 5 27-AUG-2002;
 FEATURES Location/Qualifiers
 source 1..1977
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224094 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:
 22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGCGCCCC 113
 |||||
 38 OleuGlyLeu 41
 |||||
 114 CTTGGGGGCTG 123

Sequence name: rgep2ndb:AR478779

Sequence documentation:
 LOCUS AR478779 1977 bp DNA linear PAT 14-MAY-2004
 DEFINITION Sequence 5 from patent US 6699671.
 ACCESSION AR478779

Alignment of: us-10-726-967a-1 x AR269225 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:
 22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGCGCCCC 113
 |||||
 38 OleuGlyLeu 41
 |||||
 114 CTTGGGGGCTG 123

Sequence name: rgep2ndb:AR478779

Sequence documentation:
 LOCUS AR478779 1977 bp DNA linear PAT 14-MAY-2004
 DEFINITION Sequence 5 from patent US 6699671.
 ACCESSION AR478779

VERSION AR478779.1 GI:47237499
KEYWORDS
SOURCE
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1977)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6699671-A 5 02-MAR-2004;
FEATURES Location/Qualifiers
source 1..1977
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478779 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCC 113
38 OLeuGlyLeu 41
114 CCGGGGCGCTG 123

Sequence name: rgep2ndb:AR487346

Sequence documentation:

LOCUS AR487346 1977 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 5 from patent US 6706485.
ACCESSION AR487346
VERSION AR487346.1 GI:47252444

KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1977)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 5 16-MAR-2004;
FEATURES Location/Qualifiers
source 1..1977
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487346 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCC 113

38 OLeuGlyLeu 41
114 CCGGGGCGCTG 123

Sequence name: rgep2ndb:AR531985

Sequence documentation:

LOCUS AR531985 1977 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 5 from patent US 6727074.
ACCESSION AR531985
VERSION AR531985.1 GI:53920519

KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1977)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6727074-A 5 27-APR-2004;
FEATURES Location/Qualifiers
source 1..1977
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531985 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCC 113
38 OLeuGlyLeu 41
114 CCGGGGCGCTG 123

Sequence name: rgep2ndb:AR540887

Sequence documentation:

LOCUS AR540887 1977 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 5 from patent US 6737510.
ACCESSION AR540887
VERSION AR540887.1 GI:53932400

KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1977)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6737510-A 5 18-MAY-2004;
FEATURES Location/Qualifiers
source 1..1977
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540887 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
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Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AR560096

Sequence documentation:

LOCUS AR560096 1977 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 5 from patent US 6753163.
ACCESSION AR560096
VERSION AR560096.1 GI:53970463
KEYWORDS
SOURCE
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6753163-A 5 22-JUN-2004;

FEATURES Location/Qualifiers

source 1..1977
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560096 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AX105387

Sequence documentation:

LOCUS AX105387 1977 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 5 from Patent WO0123533.
ACCESSION AX105387
VERSION AX105387.1 GI:13921512
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Gurney,M. and Bienkowski,M.J.
AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: WO 0123533-A 5 05-APR-2001;
Pharmacia & Upjohn Company (US)
FEATURES Location/Qualifiers
source 1..1977
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105387 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AX378017

Sequence documentation:

LOCUS AX378017 1977 bp DNA linear PAT 18-MAR-2002
DEFINITION Sequence 3 from Patent WO0206306.
ACCESSION AX378017
VERSION AX378017.1 GI:19574051
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Yan,R., Tomaselli,A.G., Gurney,M.E., Emmons,T.L., Bienkowski,M.J. and Heinrichson,R.L.
TITLE Substrates and assays for g(b)-secretase activity
JOURNAL Patent: WO 0206306-A 3 24-JUN-2002;
FEATURES PHARMACIA & UPJOHN COMPANY (US)
Location/Qualifiers

source 1..1977

/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX378017 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AX573825

Sequence documentation:

LOCUS	AX573825	1977 bp	DNA	linear	PAT 07-JAN-2003
DEFINITION	Sequence 5 from Patent EP1249498.				
ACCESSION	AX573825				
VERSION	AX573825.1	GI:27551478			
KEYWORDS	Homo sapiens (human)				
SOURCE	Homo sapiens				
ORGANISM	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.				
REFERENCE	1 Gurney, M. and Bienkowski, M.J.				
AUTHORS	Alzheimer's disease secretase, app substrates therefor, and uses thereof				
TITLE	Patent: EP 1249498-A 5 16-OCT-2002;				
JOURNAL	PHARMACIA & UPJOHN COMPANY (US)				
FEATURES	Location/Qualifiers				
source	1. 1977				
	/organism="Homo sapiens"				
	/mol_type="unassigned DNA"				
	/db_xref="taxon:9606"				

Alignment of: us-10-726-967a-1 x AX573825 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGnHtSGlyLeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCGACGCGGATCGGCTGCTGCGCAGCGGCTGGGGGGGCCCC 113
 38 OLeuGlyLeu 41
 114 CTTGGGGCTG 123

Sequence name: rgep2ndb:BD235886

Sequence documentation:

LOCUS	BD235886	2070 bp	DNA	linear	PAT 17-JUL-2003
DEFINITION	Alzheimer's disease secretase.				
ACCESSION	BD235886				
VERSION	BD235886.1	GI:33045656			
KEYWORDS	JP 2002526081-A/2.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				

REFERENCE

1 (bases 1 to 2070)
 Gurney, M.E., Bienkowski, M.J., Heinrikson, R.L., Parodi, L.A. and Yan, R.

JOURNAL

Alzheimer's disease secretase
 Patent: JP 2002526081-A 2 20-AUG-2002;
 PHARMACIA AND UPJOHN CO

COMMENT

OS Homo sapiens (human)
 PN JP 2002526081-A/2
 PD 20-AUG-2002
 PR 23-SEP-1999 JP 2000574268
 PI 24-SEP-1998 US 60/101594
 PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
 HEINRIKSON, PARODI, RIQIANG YAN
 PC C12N15/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC
 C12N1/19, PC
 C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/ PC

15, G01N33/50//C12N1/21, C12R1/19, C12N15/00, C12N5/00 CC
 Alzheimer's disease secretase
 FT Key Location/Qualifiers
 FT source 1. .2070
 FT /organism="Homo sapiens (human)"
 /db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235886 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGnHtSGlyLeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCGACGCGGATCGGCTGCTGCGCAGCGGCTGGGGGGGCCCC 113
 38 OLeuGlyLeu 41
 114 CTTGGGGCTG 123

Sequence name: rgep2ndb:AR224093

Sequence documentation:

LOCUS	AR224093	2070 bp	DNA	linear	PAT 26-SEP-2002
DEFINITION	Sequence 3 from patent US 6440698.				
ACCESSION	AR224093				
VERSION	AR224093.1	GI:23332753			
KEYWORDS	Unknown.				
SOURCE	Unknown.				
ORGANISM	Unknown.				

REFERENCE

1 (bases 1 to 2070)
 Gurney, M.E., Bienkowski, M.J., Heinrikson, R.L., Parodi, L.A. and Yan, R.

JOURNAL

Alzheimer's disease secretase, APP substrates therefor, and uses thereof
 Patent: US 6440698-A 3 27-AUG-2002;

FEATURES

Location/Qualifiers
 1. .2070
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224093 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGnHtSGlyLeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCGACGCGGATCGGCTGCTGCGCAGCGGCTGGGGGGGCCCC 113
 38 OLeuGlyLeu 41
 114 CTTGGGGCTG 123

Sequence name: rgep2ndb:AR269224

Sequence documentation:
LOCUS AR269224 2070 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 3 from patent US 6500667.
ACCESSION AR269224
VERSION AR269224.1 GI:29700192
KEYWORDS
SOURCE
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Aspartyl protease 2 (asp2) antisense oligonucleotides
JOURNAL Patent: US 6500667-A 3 31-DEC-2002;
FEATURES
source Location/Qualifiers
1..2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269224 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00	100.00
Gaps:	0	Total Percent Identity:	100.00	100.00

Alignment:

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22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
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Sequence name: rgep2ndb:AR478778

Sequence documentation:
LOCUS AR478778 2070 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 3 from patent US 6699671.
ACCESSION AR478778
VERSION AR478778.1 GI:47237498
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6699671-A 3 02-MAR-2004;
FEATURES
source Location/Qualifiers
1..2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478778 ..

Alignment segment 1/1: (+)

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Matching Percent Similarity:	100.00	Total length:	20	20
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Gaps:	0	Total Percent Identity:	100.00	100.00

Alignment:

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|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
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38 OLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
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Sequence name: rgep2ndb:AR487345

Sequence documentation:
LOCUS AR487345 2070 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 3 from patent US 6706485.
ACCESSION AR487345
VERSION AR487345.1 GI:47252443
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.

TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 3 16-MAR-2004;
FEATURES
source Location/Qualifiers
1..2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487345 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00	100.00
Gaps:	0	Total Percent Identity:	100.00	100.00

Alignment:

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22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
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Sequence name: rgep2ndb:AR531984

Sequence documentation:
LOCUS AR531984 2070 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 3 from patent US 6727074.
ACCESSION AR531984
VERSION AR531984.1 GI:53920518
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6727074-A 3 27-APR-2004;
FEATURES
source Location/Qualifiers
1..2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531984 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
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Gaps:	0		

Alignment:

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22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCTGGGGCTG
|||||
123
```

Sequence name: rgep2ndb:AR540886

Sequence documentation:

LOCUS AR540886 2070 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 3 from patent US 6737510.
ACCESSION AR540886
VERSION AR540886.1 GI:53932399
KEYWORDS
SOURCE
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6737510-A 3 18-MAY-2004;
FEATURES
source
1. 2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540886 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCTGGGGCTG
|||||
123
```

Sequence name: rgep2ndb:AR560095

Sequence documentation:

LOCUS AR560095 2070 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 3 from patent US 6753163.
ACCESSION AR560095
VERSION AR560095.1 GI:53970462
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6753163-A 3 22-JUN-2004;
FEATURES
source
1. 2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560095 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCTGGGGCTG
|||||
123
```

Sequence name: rgep2ndb:AX105385

Sequence documentation:

LOCUS AX105385 2070 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 3 from Patent WO0123533.
ACCESSION AX105385
VERSION AX105385.1 GI:13921511
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
thereof
JOURNAL Patent: WO 0123533-A 3 05-APR-2001;
FEATURES
source
1. 2070
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105385 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
41
```

|||||
114 CCTGGGGCTG

123

Sequence name: rgep2ndb:AX378015

Sequence documentation:

LOCUS AX378015 2070 bp DNA linear PAT 18-MAR-2002
DEFINITION Sequence 1 from Patent WO0206306.

ACCESSION AX378015

VERSION AX378015.1 GI:19574050

KEYWORDS

SOURCE

ORGANISM

Homo sapiens (human)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS

TITLE

JOURNAL

PHARMACIA & UPJOHN COMPANY (US)

FEATURES

source

1. 2070

/organism="Homo sapiens"

/mol_type="unassigned DNA"

/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX378015 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCGACGACGCGATCCGCTCCCTGCGCAGCGGCTGGGGGGCCCC 113
38 oLeuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rgep2ndb:AX573823

Sequence documentation:

LOCUS AX573823 2070 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 3 from Patent EPI249498.

ACCESSION AX573823

VERSION AX573823.1 GI:27551477

KEYWORDS

SOURCE

ORGANISM

Homo sapiens (human)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS

TITLE

JOURNAL

PHARMACIA & UPJOHN COMPANY (US)

FEATURES

source

1. 2070

/organism="Homo sapiens"

/mol_type="unassigned DNA"

/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573823 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCGACGACGCGATCCGCTCCCTGCGCAGCGGCTGGGGGGCCCC 113
38 oLeuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rgep2ndb:AX700447

Sequence documentation:

LOCUS AX700447 2070 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 2 from Patent WO03012089.

ACCESSION AX700447

VERSION AX700447.1 GI:29536238

KEYWORDS

SOURCE

ORGANISM

Homo sapiens (human)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS

TITLE

JOURNAL

Astex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES

source

1. 2070

/organism="Homo sapiens"

/mol_type="unassigned DNA"

/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700447 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCGACGACGCGATCCGCTCCCTGCGCAGCGGCTGGGGGGCCCC 113
38 oLeuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rgep2ndb:AF200343

Sequence documentation:

LOCUS AF200343 2070 bp mRNA linear PRI 12-DEC-1999
DEFINITION Homo sapiens chromosome 11 aspartyl protease 2 mRNA, complete cds.

ACCESSION AF200343

VERSION AF200343.1 GI:6561813

KEYWORDS

SOURCE

ORGANISM

Homo sapiens (human)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 REFERENCE 1 (bases 1 to 2070)
 AUTHORS Yan, R., Bienkowski, M.J., Shuck, M.E., Miao, H., Torry, M.C., Pauley, A.M., Brascher, J.R., Strattan, N.C., Macheso, W.R., Buhl, A.E., Carter, D.B., Tomasselli, A.G., Parodi, L.A., Heinrichson, R.L. and Gurney, M.E.
 TITLE Membrane-anchored aspartyl protease with Alzheimer's disease beta-secretase activity
 JOURNAL Nature 402 (6761), 533-537 (1999)
 MEDLINE 20057170
 PUBMED 10591213
 REFERENCE 2 (bases 1 to 2070)
 AUTHORS Bienkowski, M.J., Shuck, M.E., Slightom, J.L. and Drong, R.F.
 TITLE Direct Submission
 JOURNAL Submitted (29-OCT-1999) Genomics Research, Pharmacology, 301 Henrietta, Kalamazoo, MI 49007, USA
 FEATURES
 source location/Qualifiers
 1. 2070
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /chromosome="11"
 /map="11q23.3-24.1"
 1. 1506
 /codon_start=1
 /product="aspartyl protease 2"
 /protein_id="AA017079.1"
 /db_xref="GI:6561814"
 /translation="MAQALPMLLMGAGVLPANHTGTHGIRLPLRSGLGAPGLRLP
 RPTDEBERBERGSGSPFEMVDNLRKSGGQVYEMTGSPQNTLILVDYSSNFAAG
 AATPSPHRYRQRLSTYRDLRGVYPTQCGMBELSTDLVSIHGRVYPRANI
 AATPSPHRYRQRLSTYRDLRGVYPTQCGMBELSTDLVSIHGRVYPRANI
 GFLPNOSEVLAISVSGTINLRPKKVPFAVAKSIKASSTKFPDGFMLGQLVCMQMG
 DCEYNDKSIIVSGTINLRPKKVPFAVAKSIKASSTKFPDGFMLGQLVCMQMG
 TTPNIIIPVSIYLMGEVNTSPRTITLPOOYLRPVDVATSDQCYKPAISOSTGT
 VMGAVMEGVVDPBARAKRIGPFAVSACHVDEFRTPAAGSPFTLMEQCGNIPT
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 Alignment of: us-10-726-967a-1 x AF200343 ..
 Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

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22 ThrGlnH1eglyIleArgLeuProLeuAArgserglyLeuGlyAlaLpr 38
64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 113
38 olenuGlyLeu
114 CCTGGGGGCTG
123

```

Sequence name: rgep2ndb:BC036084

Sequence documentation:
 LOCUS BC036084 2174 bp mRNA linear PRI 30-JUN-2004
 DEFINITION Homo sapiens beta-site APP-cleaving enzyme 1, transcript variant a,
 mRNA (cDNA clone MGC:33762 IMAGE:5311572), complete cds.
 ACCESSION BC036084
 VERSION BC036084.1 GI:23273578
 KEYWORDS MGC.
 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 REFERENCE 1 (bases 1 to 2174)

AUTHORS Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, M., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Schaeetz, T.E., Brownstein, M.J., Ueda, T.B., Tohbiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loggellano, N.A., Peters, G.J., Abramson, R.D., Muliyil, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Hale, S., Garcia, A.M., Gay, L.J., Huylk, S.W., Morley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Huylk, S.W., Villalón, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Sanchez, J., Helton, E., Ketterman, M., Madan, A., Rodriguez, S., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smallos, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
 Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
 Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
 12477932
 2 (bases 1 to 2174)
 Strausberg, R.
 Direct Submission
 Submitted (31-JUL-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA
 NIH-MGC Project URL: <http://mgc.nci.nih.gov>
 Contact: MGC help desk
 Email: gcgaps-remail.nih.gov
 Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
 cDNA Library Preparation: Michael J. Brownstein (NHGRI) & Shiraki Toshiyuki and Piero Carninci (RIKEN)
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LNL)
 DNA Sequencing by: Sequencing Group at the Stanford Human Genome Center, Stanford University School of Medicine, Stanford, CA 94305
 Web site: <http://www.bngc.stanford.edu>
 Contact: (Dickson, Mark) mcdpaxil.stanford.edu
 Dickson, M., Schmutz, J., Grimwood, J., Rodriguez, A., and Myers, R. M.
 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LNL at: <http://image.llnl.gov>
 Series: IRAP Plate: 48 Row: p Column: 18
 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21040369.
 FEATURES
 source location/Qualifiers
 1. 2174
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /clone="MGC:33762 IMAGE:5311572"
 /cissue_type="Brain, hypothalamus"
 /clone_lib="NIH MGC_96"
 /lab_host="DH10E"
 /note="Vector: pBluescript"
 1. 2174
 /gene="BACE1"
 /note="synonyms: ASP2, HSPC104, KIAA1149, BACE"
 /db_xref="LOCUSID:23621"
 /db_xref="MIM:604252"
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 /gene="BACE1"
 /codon_start=1
 /product="beta-site APP-cleaving enzyme 1, isoform A preproprotein"
 /protein_id="AA036084.1"
 /db_xref="GI:23273579"
 /db_xref="LOCUSID:23621"
 /db_xref="MIM:604252"
 /translation="MAQALPMLLMGAGVLPANHTGTHGIRLPLRSGLGAPGLRLP

RETEDEPERGRSGFVEMUNDLRKSGGQYVYMTVSGSPQNTILVDTGSSNFAVG
AAPPFTLHRYQROLFTYRDLRKGVYVPTQGMBSGLDLSIPHGNVVRANI
AATIESDKFTINSNWSGILGLAYAEIARPDLSLPPFDSLKQTHVNLPSIOLCGA
GFPLNQBVLASVGSMSIIGIDHSLYGTSLMYPIRREWEYEVIVRAVINGDLKM
DCKEYNDKSLVDSGTTNLRLPKKVPFAVSGIKAASSTKFPDGMGLVCMQMG
TTPNNIPVLSLYMGVYNSFRITLIPQYLRPVDAVTSODDCKKFAISOSSTGT
VMGAVIMGFVYVDFBARKRIGFAVASCHEIDERTAVAGSPFTLDMEOCGYNIIPOT
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Alignment of: us-10-726-967a-1 x BC036084 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
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530 ACCGACGACGGCATCCGCTGCCCTGCGACGCGCTGGGGGGCCCC 569
38 OLeuGlyLeu 41
|||||
570 CCTGGGGCTG 579

Sequence name: rgep2ndb:AR404203

Sequence documentation:
LOCUS AR404203 2348 bp DNA linear PAT 18-DEC-2003
DEFINITION Sequence 42 from patent US 6627739.
ACCESSION AR404203
VERSION AR404203.1 GI:40152243
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2348)
AUTHORS Anderson,J.P., Baal,G., Doan,M.T., Frigon,N., John,V., Power,M.,
Sinha,S., Tatsuno,G., Tung,J., Wang,S. and McConlogue,L.
TITLE .beta.-secretase enzyme compositions and methods
JOURNAL Patent: US 6627739-A 42 30-SEP-2003;
FEATURES
source Location/Qualifiers
1..2348
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404203 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
369 ACCGACGACGGCATCCGCTGCCCTGCGACGCGCTGGGGGGCCCC 418
38 OLeuGlyLeu 41
|||||
419 CCTGGGGCTG 428

Sequence name: rgep2ndb:AR404204

Sequence documentation:

LOCUS AR404204 2348 bp DNA linear PAT 18-DEC-2003
DEFINITION Sequence 44 from patent US 6627739.
ACCESSION AR404204
VERSION AR404204.1 GI:40152244
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2348)
AUTHORS Anderson,J.P., Baal,G., Doan,M.T., Frigon,N., John,V., Power,M.,
Sinha,S., Tatsuno,G., Tung,J., Wang,S. and McConlogue,L.
TITLE .beta.-secretase enzyme compositions and methods
JOURNAL Patent: US 6627739-A 44 30-SEP-2003;
FEATURES
source Location/Qualifiers
1..2348
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404204 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
369 ACCGACGACGGCATCCGCTGCCCTGCGACGCGCTGGGGGGCCCC 418
38 OLeuGlyLeu 41
|||||
419 CCTGGGGCTG 428

Sequence name: rgep2ndb:AX700446

Sequence documentation:
LOCUS AX700446 2526 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 1 from Patent WO03012089.
ACCESSION AX700446
VERSION AX700446.1 GI:29536237
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Yon,J., Cleasby,A., Bruinzeel,W.D., Maure,S.L., Tickle,I. and
Sharif,A.
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use
thereof
JOURNAL Patent: WO 03012089-A 1 13-FEB-2003;
FEATURES
source Astex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)
Location/Qualifiers
1..2526
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700446 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 517 ACCGAGCAGCGGATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 566
 38 OLeuGlyLeu 41
 |||||
 567 CCTGGGGCTG 576

Sequence name: rgep2ndb:AF190725

Sequence documentation:

LOCUS AF190725 2526 bp mRNA linear PRI 26-OCT-1999
 DEFINITION Homo sapiens beta-site APP cleaving enzyme (BACE) mRNA, complete
 cdb.
 ACCESSION AF190725 GI:6118538
 VERSION AF190725.1
 KEYWORDS
 SOURCE Homo sapiens (human)
 ORGANISM

REFERENCE

1 (bases 1 to 2526)
 Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, B.A.,
 Denis, P., Teplow, D.B., Ross, S., Amarante, P., Loeb, R., Luo, Y.,
 Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,
 Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,
 Treanor, J., Rogers, G. and Citron, M.
 Beta-secretase cleavage of Alzheimer's amyloid precursor protein by
 the transmembrane aspartic protease BACE

TITL

Science 286 (5440), 735-741 (1999)

JOURNAL MEDLINE 20002972
 PUBMED 10531052
 2 (bases 1 to 2526)
 Bennett, B.D., Vassar, R. and Citron, M.
 Direct Submission
 Submitted (29-SEP-1999) Neuroscience, Amgen Inc., One Amgen Center
 Dr., Thousand Oaks, CA 91320-1799, USA

Location/Qualifiers

FEATURES
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 1..2526
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
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 /gene="BACE"
 454..1959
 /gene="BACE"
 /codon_start=1
 /product="beta-site APP cleaving enzyme"
 /protein_id="AF04142.1"
 /db_xref="GI:6118539"

/translation="MAQALPWLIMMGAGVLPAGHTQHGIRLPSGLGAGPLRLP
 RDEDEBERGRGSPFVEMVDNLKSGSGQGYVEMTSGSPQLNLIVDSSNFAG
 AAPHPILRYRORLSSTYRDLKGVVPTQKMGSEIGTDLVSIPIHGNVVRANI
 AATBEDKPRFNSNMEGITGLAYARADDLEPRFSLVQTHVPRNPSIQGLCA
 GFLNDSVILASVGSMTIGIDHSLTGSLMTPIRRENTYIVIVRINQDLKA
 DCKEYNDKSIIVDSGTNLRLPKRVFAAAXSIKASSTKFPDGFVLGSLQVCSWG
 TTPWNIIPVLSIVMGVNTQSFRITILPOQYLRPVEDVATSDDDCYKPAISOSTGT
 VMGAVIMEGFYVDFRARKRIGFAVSAHVHDEFRTAAVGPVTLDMEDCGYNIPT
 DESTLMTIAVMAAICALFPLPLCLMWCCQRCLRCRQGHDPFADDISILK"

Alignment of: us-10-726-967a-1 x AF190725

Alignment segment 1/1: (+)

Quality: 104.00
 Matching length: 20
 Matching Percent Similarity: 100.00
 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
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 517 ACCGAGCAGCGGATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 566
 38 OLeuGlyLeu 41
 |||||
 567 CCTGGGGCTG 576

Sequence name: rgep2ndb:AR178469

Sequence documentation:

LOCUS AR178469 2541 bp DNA linear PAT 20-APR-2002
 DEFINITION Sequence 1 from patent US 6319689.
 ACCESSION AR178469
 VERSION AR178469.1 GI:20219607
 KEYWORDS
 SOURCE Unknown.
 ORGANISM

REFERENCE 1 (bases 1 to 2541)
 Powell, D.J., Chapman, C.G., Murphy, K. and Smith, T.S.
 ASP2
 Patent: US 6319689-A 1 20-NOV-2001;
 Location/Qualifiers
 1..2541
 /organism="unknown"
 /mol_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR178469

Alignment segment 1/1: (+)

Quality: 104.00
 Matching length: 20
 Matching Percent Similarity: 100.00
 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 64 ACCGAGCAGCGGATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 113
 38 OLeuGlyLeu 41
 |||||
 114 CCTGGGGCTG 123

Sequence name: rgep2ndb:E50816

Sequence documentation:

LOCUS E50816 2541 bp DNA linear PAT 18-JUN-2001
 DEFINITION Aspartate proteinase ASP2.
 ACCESSION E50816
 VERSION E50816.1 GI:13023199
 KEYWORDS JP 2000060579-A/1.
 SOURCE JP 2000060579-A/1.
 ORGANISM unidentified
 1 (bases 1 to 2541)
 David, J.P., Conrad, G.C., Kay, M. and Trudy, S.S.

REFERENCE 1 (bases 1 to 2541)
 David, J.P., Conrad, G.C., Kay, M. and Trudy, S.S.
 Aspartate proteinase ASP2
 Patent: JP 2000060579-A 1 29-FEB-2000;
 JOURNAL SMITHKLINE BEECHAM CORP
 OS Unidentified
 PN JP 2000060579-A/1
 PD 29-FEB-2000
 PF 03-AUG-1999 JP 1999219665
 PR 28-JAN-1997 GB 9701684.4
 PI DAVID J POWERU, CONRAD G CHAPPMAN, KAY MAFI, TRUDY S SMITH PC
 C12N15/09, A61K31/7088, A61K38/46, A61K39/00, A61K39/395, PC
 A61K39/395, A61K48/00,

COMMENT
 PN JP 2000060579-A/1
 PD 29-FEB-2000
 PF 03-AUG-1999 JP 1999219665
 PR 28-JAN-1997 GB 9701684.4
 PI DAVID J POWERU, CONRAD G CHAPPMAN, KAY MAFI, TRUDY S SMITH PC
 C12N15/09, A61K31/7088, A61K38/46, A61K39/00, A61K39/395, PC
 A61K39/395, A61K48/00,

PC A61P25/28,A61P35/00,A61P43/00,C07K16/40,C12N1/15,C12N1/19, PC
C12N1/21,
PC C12N5/10,C12N9/64,C12Q1/37,G01N33/15,G01N33/50,G01N33/53, PC
G01N33/566,
PC G01N33/577//C12P21/08,C12N15/00,A61K37/54,C12N5/00 CC
Strandedness: Single;
CC Topology: Linear;
FH Key 1..2541 Location/Qualifiers
FT source 1..2541 /organism='Unidentified'.
Location/Qualifiers
1..2541
/organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"

Alignment of: us-10-726-967a-1 x B50816 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	38.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AX002655

Sequence documentation:

LOCUS AX002655 2541 bp DNA linear PAT 10-MAR-2000
DEFINITION Sequence 1 from Patent EP0855444.
ACCESSION AX002655
VERSION AX002655.1 GI:7242133

KEYWORDS

SOURCE unidentified
ORGANISM unclassified.

REFERENCE 1 (bases 1 to 2541)

AUTHORS Murphy, K. and Chapman, C.G.

TITLE Aspartic proteinase 2 (ASP2)

JOURNAL Patent: EP 0855444-A 1 29-JUL-1998;
SMITHKLINE BEECHAM PLC (GB); SMITHKLINE BEECHAM CORP (US)

FEATURES
source 1..2541
Location/Qualifiers
1..2541
/organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"

Alignment of: us-10-726-967a-1 x AX002655 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	38.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGGCCCC 113
|||||

38 OLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AX700452

Sequence documentation:

LOCUS AX700452 2541 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 7 from Patent WO03012089.
ACCESSION AX700452
VERSION AX700452.1 GI:29536241

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM

REFERENCE

AUTHORS Von, J., Cleasby, A., Bruinzeel, W.D., Measure, S.L., Tickle, I. and
Sharff, A.

TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use
thereof

JOURNAL Patent: WO 03012089-A 7 13-FEB-2003;
Astell Technology Limited (GB); JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES

source 1..2541
Location/Qualifiers
1..2541
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700452 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	38.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR305033

Sequence documentation:

LOCUS AR305033 3252 bp DNA linear PAT 12-JUN-2003
DEFINITION Sequence 1 from patent US 6545127.
ACCESSION AR305033
VERSION AR305033.1 GI:31694263

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 3252)

AUTHORS Tang, J. J. N., Lin, X., Koelsch, G. and Hong, L.

TITLE Catalytically active recombinant memapsin and methods of use
thereof

JOURNAL Patent: US 6545127-A 1 08-APR-2003;
Location/Qualifiers
1..3252
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR305033 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
25 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 74
38 OleuGlyLeu
75 CCTGGGGGCTG 84

Sequence name: rgep2ndb:AX062111

Sequence documentation:

LOCUS AX062111 3252 bp DNA linear PAT 24-JAN-2001
DEFINITION Sequence 1 from Patent WO0100665.
ACCESSION AX062111
VERSION AX062111.1 GI:12540032

KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE
AUTHORS Tang, J. J., Hong, L. and Ghosh, A. K.
TITLE Inhibitors of memapsin 2 and use thereof
JOURNAL Patent: WO 0100665-A 1 04-JAN-2001;
Oklahoma Medical Research Foundation (US);
THE UNIVERSITY OF ILLINOIS (US)

FEATURES
source 1..3252
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX062111 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
25 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 74
38 OleuGlyLeu
75 CCTGGGGGCTG 84

Sequence name: rgep2ndb:AX063201

Sequence documentation:

LOCUS AX063201 3252 bp DNA linear PAT 24-JAN-2001
DEFINITION Sequence 1 from Patent WO0100663.
ACCESSION AX063201
VERSION AX063201.1 GI:12541045

KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE
AUTHORS Tang, J. J., Hong, L. and Ghosh, A. K.
TITLE Inhibitors of memapsin 2 and use thereof
JOURNAL Patent: WO 0100663-A 1 04-JAN-2001;
Oklahoma Medical Research Foundation (US);
THE UNIVERSITY OF ILLINOIS (US)

REFERENCE
AUTHORS Tang, J. J., Lin, X. and Koelsch, G.
TITLE Catalytically active recombinant memapsin and methods of use there
JOURNAL Patent: WO 0100663-A 1 04-JAN-2001;
Oklahoma Medical Research Foundation (US)

FEATURES
source 1..3252
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX063201 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
25 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 74
38 OleuGlyLeu
75 CCTGGGGGCTG 84

Sequence name: rgep2ndb:AX472368

Sequence documentation:

LOCUS AX472368 3252 bp DNA linear PAT 09-AUG-2002
DEFINITION Sequence 1 from Patent WO02053594.
ACCESSION AX472368
VERSION AX472368.1 GI:22207364

KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE
AUTHORS Ghosh, A. K., Koelsch, G. and Tang, J. J.
TITLE Inhibitors of memapsin 2 and use thereof
JOURNAL Patent: WO 02053594-A 1 11-JUL-2002;
OKLAHOMA MED RES FOUND (US); TRUSTEES OF THE UNIVERSITY OF ILLINOIS (US)

FEATURES
source 1..3252
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX472368 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
25 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 74

38 cLeuGIyleu 41
|||||
75 CCGGGGCTG 84

Sequence name: rgep2ndb:AX700453

Sequence documentation:

LOCUS AX700453 3252 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 8 from Patent WO03012089.
ACCESSION AX700453
VERSION AX700453.1 GI:29536242

KEYWORDS Homo sapiens (human)

SOURCE

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS 1
Sharff, A., Cleesby, A., Bruinzeel, W. D., Maesure, S. L., Tickle, I. and
Crystal structure of beta-site app cleaving enzyme (bace) and use
thereof
Patent: WO 03012089-A 8 13-FEB-2003;
Aetex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)

JOURNAL

FEATURES 1. 3252
Location/Qualifiers
source /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700453 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	38.3
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	20
Gaps:	0			

Alignment:

22 ThrGlnHsGIyleAArgLeuProLeuAArgSerGIyleuGIyAlaApr 38
|||||
25 ACCGAGCAGCGGATCCGCTGCCCTGGCAGCGGCGCTGGGGGGCCCC 74
38 cLeuGIyleu 41
|||||
75 CCGGGGCTG 84

Sequence name: rgep2ndb:AF200193

Sequence documentation:

LOCUS AF200193 3252 bp mRNA linear PRI 16-FEB-2000
DEFINITION Homo sapiens memapsin 2 mRNA, partial cds.
ACCESSION AF200193
VERSION AF200193.1 GI:6470292

KEYWORDS Homo sapiens (human)

SOURCE

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS 1 (bases 1 to 3252)
Lin, X., Koelsch, G., Wu, S., Downs, D., Dashit, A. and Tang, J.
Human aspartic protease memapsin 2 cleaves the beta-secretase site
of beta-amyloid precursor protein
Proc. Natl. Acad. Sci. U.S.A. 97 (4), 1456-1460 (2000)

JOURNAL

MEDLINE 2 (bases 1 to 3252)
10677483
PUBMED

AUTHORS

TITLE Lin, X., Koelsch, G. and Tang, J.
Direct Submission
Submitted (28-OCT-1999) Protein Studies Program, Oklahoma Medical
Research Foundation, 825 N.E. 13th Street, Oklahoma City, OK 73104,

FEATURES USA
source Location/Qualifiers
1. 3252
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"

CDS

<1..1467
/function="cleaves beta-secretase site of beta-amyloid
precursor protein"
note="membrane-associated aspartic protease 2"

/codon_start=1
/product="memapsin 2"
/protein_id="AAF13715.1"

/db_xref="GI:6470293"

/translation="ACVLPRAHGTCHGIRLPLRSGLGAPLRLPRETDEBPBPGRR
GSFVWVDNLKRGSGGYIVENTVSPPTTLITLVDTGSSNPAVGAAPPRPLRRYQR
QLSTYRDRLKGVVYVPTQKWEGLGTDLVSIPLGPNTVRAVNTAATSDKFPNG
SNWEGILGLAVAEIARPDPSLEPFEDSLVKQTHVNLPSLQLCGAFPLNDSVLAV
GSMWIIIGIDHSILWYTPILRREMYEVIIVVEINQDQKNDCKEYNDKSLVD
SGTTNLRPLKVFBAVKSIIKAASSTREKPEGEOLVQAGTTPNIPVPSLY
IMGVYVNSFRITLIPQVLRPEVDVATSDDCYKFAISQSSGTVMGAIVMEGFVV
FPRAKRTGFVNSACHVDEPRTAAVEGPFYLDMDCGYNIPTDDESTLMTIAYMA
ATCALFPLCLMVCQWRCLRLRQHDHDFADISLKL"

Alignment of: us-10-726-967a-1 x AF200193 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	38.3
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	20
Gaps:	0			

Alignment:

22 ThrGlnHsGIyleAArgLeuProLeuAArgSerGIyleuGIyAlaApr 38
|||||
25 ACCGAGCAGCGGATCCGCTGCCCTGGCAGCGGCGCTGGGGGGCCCC 74
38 cLeuGIyleu 41
|||||
75 CCGGGGCTG 84

Sequence name: rgep2ndb:BC065492

Sequence documentation:

LOCUS BC065492 3893 bp mRNA linear PRI 30-JUN-2004
DEFINITION Homo sapiens beta-site APP-cleaving enzyme 1, transcript variant a,
mRNA (CDNA clone MGC:71162 IMAGE:6538154), complete cds.

ACCESSION BC065492

VERSION BC065492.1 GI:41350853

KEYWORDS MGC.

SOURCE

ORGANISM Homo sapiens (human)

REFERENCE

AUTHORS

Strausberg, R. L., Peingold, E. A., Grouse, L. H., Derge, J. G.,
Klausner, R. D., Collins, F. S., Wagner, L., Shemen, C. M., Schler, G. D.,
Altschul, S. F., Zeeberg, B., Buettow, K. H., Schaefer, C. F., Huet, N. K.,
Hopkins, R. F., Jordan, H., Moore, T., Max, S. I., Wang, J., Hsieh, F.,
Datchenko, L., Marusina, K., Farmer, A. A., Rubin, G. M., Hong, L.,
Stapleton, M., Soares, M. B., Bonaldo, M. F., Casavani, T. L.,
Scheetz, T. E., Brownstein, M. J., Uddin, T. B., Toshynski, S.,
Carninci, P., Prange, C., Raha, S. S., Loguigliano, N. A., Peters, G. J.,
Abramson, R. D., Mullany, S. J., Bosak, S. A., McEwan, P. J.,
McKernan, K. J., Malek, J. A., Gunaratne, P. H., Richards, S.,
Morley, K. C., Hale, S., Garcia, A. M., Gay, L. J., Hui, X., Gibbs, R. A.,
Vallalon, D. K., Muzny, D. M., Sodergren, E. J., Lu, X., Gibbs, R. A.,
Pahey, J., Helton, E., Ketterman, M., Madan, A., Rodriguez, S.,
Sanchez, A., Whitting, M., Madan, A., Young, A. C., Shevchenko, Y.,
Bouffard, G. G., Blakeley, R. W., Touchman, J. W., Green, E. D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalek, U., Smalls, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marr, M.A. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc. Natl. Acad. Sci. U.S.A.* 99 (26), 16899-16903 (2002) 12477932

2 (bases 1 to 3893)

Strausberg, R.

Direct Submission

Submitted (26-JUN-2004) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA

NIH-MGC Project URL: <http://mgc.nci.nih.gov>

Contact: MGC help desk

Email: cgabs-remail.nih.gov

Tissue Procurement: ATCC

cDNA Library Preparation: Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (ULNL)

DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),

Gaithersburg, Maryland;

Web site: <http://www.nisc.nih.gov/>

Contact: nisc.mgc@nih.gov

Ahter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B., Blakeley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Latic, P., Legaspi, R., Maduro, Q.L., Mastello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantirpop, S., Thomas, P.J., Touchman, J.W., Turgeson, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L., Young, A., Zhang, L.-H. and Green, E.D.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/ULNL at: <http://image.llnl.gov>

Series: IRAL Plate: 50 Row: n Column: 6

This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21040369.

FEATURES

Source

1. 3893

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="MGC:71162 IMAGE:6538154"

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/clone_id="N1H_MGC_101"

/lab_host="DH10B"

/note="Vector: POTB7"

1. 3893

/gene="BACE1"

/note="synonyms: ASP2, HSPC104, KIA1149, BACE"

/db_xref="LocusID:23621"

/db_xref="MIM:604252"

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/gene="BACE1"

/codon_start=1

/product="beta-site APP-cleaving enzyme 1, isoform A preproprotein"

/protein_id="AAH65492.1"

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/translation="MAQALFWLLIMGAGVLPAGTQHGIRLPRLSGLGAPGLRLPRTDEEPEERGRGSFVEMVNDLRGSGQGYVEMTVGSPQTLNLIADVSSNPAVGAHPPLRYRQRLSSTYDLRKGVVPTQGWEGELGTLVSIPIHGPVTVRANIAATIESDKFPIGNSNMEGILGLAVAEIARPDLSLEPFDSLAKOTHPNLFSLQCGAFPLNSEVAVASGSMIGIDHSLVSLATPTPIRREYVETIIVREINQDGLKMDCEYNDKSTVNSCTNLRIPKVPKPAKSKIAASTKPKPDPGFLGQLYCKMQAGTTPTNIFPVLISLMGEVNTQSFRTITLPQQIRPEVDVAISQDCKRAISQSTETVMGAVIMEGFVVFDRARKRIQFAVSCVHDEFRIVDAVSGPDTCLMEDCGYNIPTDSTLMTIAYMAICALFMLPLCLMVCWRRCRLRQCHDDPADDISLTK"

CDS

Gene

1. 3893

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="MGC:71162 IMAGE:6538154"

/tissue_type="lung, epitheloid carcinoma"

/clone_id="N1H_MGC_101"

/lab_host="DH10B"

/note="Vector: POTB7"

1. 3893

/gene="BACE1"

/note="synonyms: ASP2, HSPC104, KIA1149, BACE"

/db_xref="LocusID:23621"

/db_xref="MIM:604252"

462..1967

/gene="BACE1"

/codon_start=1

/product="beta-site APP-cleaving enzyme 1, isoform A preproprotein"

/protein_id="AAH65492.1"

/db_xref="GI:41350854"

/db_xref="LocusID:23621"

/db_xref="MIM:604252"

/translation="MAQALFWLLIMGAGVLPAGTQHGIRLPRLSGLGAPGLRLPRTDEEPEERGRGSFVEMVNDLRGSGQGYVEMTVGSPQTLNLIADVSSNPAVGAHPPLRYRQRLSSTYDLRKGVVPTQGWEGELGTLVSIPIHGPVTVRANIAATIESDKFPIGNSNMEGILGLAVAEIARPDLSLEPFDSLAKOTHPNLFSLQCGAFPLNSEVAVASGSMIGIDHSLVSLATPTPIRREYVETIIVREINQDGLKMDCEYNDKSTVNSCTNLRIPKVPKPAKSKIAASTKPKPDPGFLGQLYCKMQAGTTPTNIFPVLISLMGEVNTQSFRTITLPQQIRPEVDVAISQDCKRAISQSTETVMGAVIMEGFVVFDRARKRIQFAVSCVHDEFRIVDAVSGPDTCLMEDCGYNIPTDSTLMTIAYMAICALFMLPLCLMVCWRRCRLRQCHDDPADDISLTK"

Alignment of: us-10-726-967a-1 x BC065492 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.5
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Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrGlnHSGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

525 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGCTGGGGGGCCCC 574

38 OleuGlyLeu 41

575 CCGGGGGCTG 584

Sequence name: rgep2ndb:CQ824594

Sequence documentation:

LOCUS CQ824594 5625 bp RNA linear PAT 21-JUN-2004

DEFINITION Sequence 21 from Patent WO2004047872.

ACCESSION CQ824594

VERSION CQ824594.1 GI:49021634

KEYWORDS

SOURCE

ORGANISM

Homo sapiens (human)

Homo sapiens

Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 Kaemerer, W.F.

AUTHORS

TITLE Treatment of neurodegenerative disease through intracranial delivery of siRNA

JOURNAL Patent: WO 2004047872-A 21 10-JUN-2004;

Medtronic, Inc. (US)

FEATURES

Source

1. 5625

/organism="Homo sapiens"

/mol_type="unassigned RNA"

/db_xref="taxon:9606"

misc_feature

1. 5625

/note="LOCUS BACE 5625 bp mRNA linear P RI 05-NOV-2002

DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), transcript variant d, mRNA. ACCESSION NM_138973;

VERSION NM_138973.1 GI:21040367"

Alignment of: us-10-726-967a-1 x CQ824594 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrGlnHSGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

510 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGCTGGGGGGCCCC 559

38 OleuGlyLeu 41

560 CCGGGGGCTG 569

Sequence name: rgep2ndb:CQ824593

Sequence documentation:

LOCUS CQ824593 5700 bp RNA linear PAT 21-JUN-2004

DEFINITION Sequence 20 from Patent WO2004047872.
ACCESSION CQ824593
VERSION CQ824593.1 GI:49021630
KEYWORDS
ORGANISM Homo sapiens (human)
SOURCE Homo sapiens
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
AUTHORS Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
TITLE Kaemmerer, W.F.
JOURNAL Treatment of neurodegenerative disease through intracranial
delivery of sirna
Patent: WO 2004047872-A 20 10-JUN-2004;
Medtronic, Inc. (US)
FEATURES
Location/Qualifiers
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/mol_type="unassigned RNA"
/db_xref="taxon:9606"
misc_feature
1..5700
/note="LOCUS BACE 5700 bp mRNA linear P RI 21-MAY-2002
DEFINITION Homo sapiens beta-site APP-cleaving enzyme
(BACE), tr anscript variant C, mRNA. ACCESSION NM_138971;
VERSION NM_138971.1 GI:21040363"

Alignment of: us-10-726-967a-1 x CQ824593 ..
Alignment segment 1/1: (+)
Matching length: 20 Total length: 38.8
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
510 ACCGACGCGCATCCGCTGCCCTGCGACGCGCTGGGGGGGCCCC 559
38 OleuGlyLeu 41
560 CCTGGGGCTG 569

Sequence name: rgep2ndb:CQ824592
Sequence documentation:
LOCUS CQ824592 5757 bp RNA linear PAT 21-JUN-2004
DEFINITION Sequence 19 from Patent WO2004047872.
ACCESSION CQ824592
VERSION CQ824592.1 GI:49021628
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
REFERENCE Kaemmerer, W.F.
AUTHORS Treatment of neurodegenerative disease through intracranial
TITLE delivery of sirna
JOURNAL Patent: WO 2004047872-A 19 10-JUN-2004;
Medtronic, Inc. (US)
FEATURES
Location/Qualifiers
1..5757
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/db_xref="taxon:9606"
misc_feature
1..5757
/note="LOCUS BACE 5757 bp mRNA linear P RI 05-NOV-2002
DEFINITION Homo sapiens beta-site APP-cleaving enzyme
(BACE), tr anscript variant D, mRNA. ACCESSION NM_138972;
VERSION NM_138972.1 GI:21040365"

Alignment of: us-10-726-967a-1 x CQ824592 ..
Alignment segment 1/1: (+)
Matching length: 20 Total length: 38.8
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
518 ACCGACGCGCATCCGCTGCCCTGCGACGCGCTGGGGGGGCCCC 567
38 OleuGlyLeu 41
568 CCTGGGGCTG 577

Sequence name: rgep2ndb:CQ824591
Sequence documentation:
LOCUS CQ824591 5832 bp RNA linear PAT 21-JUN-2004
DEFINITION Sequence 18 from Patent WO2004047872.
ACCESSION CQ824591
VERSION CQ824591.1 GI:49021626
KEYWORDS
SOURCE Homo sapiens (human)

Alignment of: us-10-726-967a-1 x AX364933 ..
Alignment segment 1/1: (+)
Matching length: 20 Total length: 38.8
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:
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510 ACCGACGCGCATCCGCTGCCCTGCGACGCGCTGGGGGGGCCCC 559
38 OleuGlyLeu 41
560 CCTGGGGCTG 569

Sequence name: rgep2ndb:AX364933
Sequence documentation:
LOCUS AX364933 5757 bp DNA linear PAT 15-FEB-2002
DEFINITION Sequence 84 from Patent WO0206315.
ACCESSION AX364933
VERSION AX364933.1 GI:18696823
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
REFERENCE Mintz, L., Freilich, S., and Bernstein, D.
AUTHORS Novel nucleic acid and amino acid sequences
JOURNAL Patent: WO 0206315-A 84 24-JAN-2002;
Comugen Ltd. (IL)
FEATURES
Location/Qualifiers
1..5757
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

ORGANISM

Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 Kaemerer, W. F.
Treatment of neurodegenerative disease through intracranial
delivery of siRNA

JOURNAL

Patent: WO 2004047872-A 18 10-JUN-2004;
Medtronic, Inc. (US)

FEATURES

Location/Qualifiers

1..5832

/organism="Homo sapiens"

/mol_type="unassigned RNA"

/db_xref="taxon:9606"

misc_feature

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LOCUS BACE 5832 bp mRNA linear PRI 05-NOV-2002 DEFINITION
Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
anscript variant a, mRNA."

Alignment of: us-10-726-967a-1 x CQ824591 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
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510 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGCGCCCC 559
38 olenuGlyLeu 41
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560 CCTGGGGCGCTG 569

Sequence name: rgep2ndb:CQ726974

Sequence documentation:

LOCUS CQ726974 5842 bp DNA linear PAT 03-FEB-2004
DEFINITION Sequence 12908 from Patent WO2068579.
ACCESSION CQ726974
VERSION CQ726974.1 GI:42291589

KEYWORDS

Source Homo sapiens (human)

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 Venter, C. J., Adams, M. C., Li, P. W. and Myers, E. W.
Kits, such as nucleic acid arrays, comprising a majority of
human exons or transcripts, for detecting expression and other uses
thereof

JOURNAL

Patent: WO 02068579-A 12908 06-SEP-2002;
PE Corporation (NY) (US)

FEATURES

Location/Qualifiers

1..5842

/organism="Homo sapiens"

/mol_type="unassigned DNA"

/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x CQ726974 ..

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Quality:	104.00	Score:	38.8
Matching length:	20	Total length:	20
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Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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515 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGCGCCCC 564
38 olenuGlyLeu 41
|||||
565 CCTGGGGCGCTG 574

Sequence name: rgep2ndb:AF201468

Sequence documentation:

LOCUS AF201468 5878 bp mRNA linear PRI 19-DEC-1999
DEFINITION Homo sapiens APP beta-secretase mRNA, complete cds.
ACCESSION AF201468
VERSION AF201468.1 GI:6601444

KEYWORDS

Source Homo sapiens (human)

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 (bases 1 to 5878)
Sinha, S., Anderson, J. P., Barbour, R., Basl, G. S., Caccavello, R.,
Davis, D., Doan, M., Dovey, H. F., Frigon, N., Hong, J.,
Jacobson-Crook, K., Jewett, N., Keim, P., Knops, J., Lieberburg, I.,
Power, M., Tan, H., Tatsuno, G., Tung, J., Schenk, D., Seubert, P.,
Suomenaar, S., Wang, S., Walker, D., Zhao, J., McConlogue, L. and
John, V.

TITLE

Purification and cloning of amyloid precursor protein
beta-secretase from human brain

Nature 402 (6761), 537-540 (1999)

JOURNAL

MEDLINE

PUBMED

REFERENCE

AUTHORS

TITLE

JOURNAL

Submitted (03-NOV-1999) Gene Expression Group, Brian
Pharmaceuticals, Inc., 800 Gateway Blvd., S. San Francisco, CA
94080, USA

FEATURES

source

CDS

Location/Qualifiers
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/mol_type="mRNA"
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AATTSDDKPFINSNNBGLGLAYAIARPDSDLBEPFSDLVYQTHVPIPSIOLCA
GFLNDSVLAIVGSMITIGIDHSYTSMTPTIRREYEVIVIVVINGDLMK
DCKEYVDSKIVDSGTTNRLPKRVEAAVKSIIKASSTKPFDFWLGQVLCWQNG
TTPWNI FPIVSLTIGEVNQSFRITILPQOYLRPVEDVATISODDCFKAISSSTGT
VMGAVIMEGFYVFEARKRIGPAVSAACHVDFRPAAVGSPVTLDMEDCGYNIPT
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Alignment of: us-10-726-967a-1 x AF201468 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.8
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SOURCE          Unknown.
ORGANISM        Unknown.
REFERENCE       Unclassified.
AUTHORS         1 (bases 1 to 1506)
TITLE           Christie,G., Li,X., Powell,D.J. and Zhu,Y.
JOURNAL         Mouse aspartic secretase-2(masp-2)
FEATURES        Patent: US 6361975-A 1 26-MAR-2002;
                Location/Qualifiers
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                /mol_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR202196 ..

Alignment segment 1/1: (+)

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      Total Percent Similarity: 90.00      Total Percent Identity: 80.00
      Gaps: 0

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||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
64 ACCACCTCGCGATCCGCGCTGCCCCCTTCGAGCGCGCTGGACGCGCAC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:BD235888

Sequence documentation:
LOCUS      BD235888                2043 bp      DNA      linear      PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION  BD235888
VERSION    BD235888.1 GI:33045658
KEYWORDS   JP 2002526081-A/4.
SOURCE     Mus musculus (house mouse)
ORGANISM   Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE  1 (bases 1 to 2043)
AUTHORS    Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and
            Yan,R.
TITLE      Alzheimer's disease secretase
JOURNAL    Patent: JP 2002526081-A 4 20-AUG-2002;
COMMENT    PHARMACIA AND UPJOHN CO
            OS Mus musculus (mouse)
            PN JP 2002526081-A/4
            PD 20-AUG-2002
            PR 23-SEP-1999 JP 2000574268
            PI 24-SEP-1998 US 60/101594
            PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
            HEINRIKSON,
            PI LUIS A PARODI, RIQIANG YAN
            PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC
            C12N1/19,
            PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
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            FT              Location/Qualifiers
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FEATURES
source

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Alignment of: us-10-726-967a-1 x BD235888 ..	
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38 oLeuGlyLeu	41
114 CCGGGGCGCTG	123
Sequence name: rgep2ndb:AR224095	
Sequence documentation:	
LOCUS AR224095 2043 bp DNA linear PAT 26-SEP-2002	
DEFINITION Sequence 7 from patent US 6440698.	
ACCESSION AR224095	
VERSION AR224095.1 GI:23332755	
KEYWORDS	
SOURCE	Unknown.
ORGANISM	Unknown.
REFERENCE	Unclassified.
AUTHORS	1 (bases 1 to 2043)
	Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.
TITLE	Alzheimer's disease secretase, ADP substrates therefor, and uses therefor
JOURNAL	Patent: US. 6440698-A 7 27-AUG-2002;
FEATURES	Location/Qualifiers
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	/mol_type="genomic DNA"
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Percent Similarity: 20	Total length: 20
Matching Percent Similarity: 90.00	Matching Percent Identity: 80.00
Total Percent Similarity: 90.00	Total Percent Identity: 80.00
Gaps: 0	
Alignment:	
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38 oLeuGlyLeu	41
114 CCGGGGCGCTG	123
Sequence name: rgep2ndb:AR269226	
Sequence documentation:	
LOCUS AR269226 2043 bp DNA linear PAT 10-APR-2003	
DEFINITION Sequence 7 from patent US 6500667.	
ACCESSION AR269226	
VERSION AR269226.1 GI:29700194	
KEYWORDS	
SOURCE	Unknown.
ORGANISM	Unknown.

Unclassified

REFERENCE 1 (bases 1 to 2043)

AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Apateryl protease 2 (Aap2) antisense oligonucleotides

JOURNAL Patent: US 650667-A 7 31-DEC-2002;

FEATURES Location/Qualifiers

SOURCE 1..2043

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269226 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
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Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

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|||||
64 ACCCATCTCGGCATCGGCTGCCCTTCGCAGCGGCTGCAGGGCCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGCCCTG 123
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Sequence name: rgep2ndb:AR478780

Sequence documentation:

LOCUS AR478780 2043 bp DNA linear PAT 14-MAY-2004

DEFINITION Sequence 7 from patent US 6699671.

ACCESSION AR478780

VERSION AR478780.1 GI:47237500

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 2043)

AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6699671-A 7 02-MAR-2004;

FEATURES Location/Qualifiers

SOURCE 1..2043

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478780 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCGGCTGCCCTTCGCAGCGGCTGCAGGGCCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGCCCTG 123
```

Sequence name: rgep2ndb:AR487347

Sequence documentation:

LOCUS AR487347 2043 bp DNA linear PAT 14-MAY-2004

DEFINITION Sequence 7 from patent US 6706485.

ACCESSION AR487347

VERSION AR487347.1 GI:47252445

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 2043)

AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 7 16-MAR-2004;

FEATURES Location/Qualifiers

SOURCE 1..2043

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487347 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
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64 ACCCATCTCGGCATCGGCTGCCCTTCGCAGCGGCTGCAGGGCCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGCCCTG 123
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Sequence name: rgep2ndb:AR531986

Sequence documentation:

LOCUS AR531986 2043 bp DNA linear PAT 08-OCT-2004

DEFINITION Sequence 7 from patent US 6727074.

ACCESSION AR531986

VERSION AR531986.1 GI:53920520

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 2043)

AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6727074-A 7 27-APR-2004;

FEATURES Location/Qualifiers

SOURCE 1..2043

/organism="unknown"

/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531986 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
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Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCCATCTCGGATCGGCTGCCCTTCGACAGCGGCTGGCAGGCCAC 113
 38 OLeuGlyLeu 41
 114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AR540888

Sequence documentation:

LOCUS AR540888 2043 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 7 from patent US 6737510.
 ACCESSION AR540888
 VERSION AR540888.1 GI:53932401
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 2043)
 AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
 thereof
 JOURNAL Patent: US 6737510-A 7 18-MAY-2004;
 FEATURES Location/Qualifiers
 source 1..2043
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540888 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
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Gaps: 0

Alignment:

22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
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 38 OLeuGlyLeu 41
 114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AR560097

Sequence documentation:

LOCUS AR560097 2043 bp DNA linear PAT 08-OCT-2004
 DEFINITION Sequence 7 from patent US 6753163.
 ACCESSION AR560097
 VERSION AR560097.1 GI:53970464
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 2043)
 AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
 Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
 thereof
 JOURNAL Patent: US 6753163-A 7 22-JUN-2004;
 FEATURES Location/Qualifiers
 source 1..2043
 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560097 ..
 Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
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Total Percent Similarity:	90.00	Total Percent Identity:	80.00

Gaps: 0

Alignment:

22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCCATCTCGGATCGGCTGCCCTTCGACAGCGGCTGGCAGGCCAC 113
 38 OLeuGlyLeu 41
 114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AX105389

Sequence documentation:

LOCUS AX105389 2043 bp DNA linear PAT 30-APR-2001
 DEFINITION Sequence 7 from Patent WO0123533.
 ACCESSION AX105389
 VERSION AX105389.1 GI:13921513
 KEYWORDS
 SOURCE Mus musculus (house mouse)
 ORGANISM Mus musculus

REFERENCE 1
 AUTHORS Gurney,M. and Bienkowski,M.J.
 TITLE Alzheimer's disease secretase, app substrates therefor, and uses
 thereof
 JOURNAL Patent: WO 0123533-A 7 05-APR-2001;
 FEATURES Pharmacia & Upjohn Company (US)
 source 1..2043
 /organism="Mus musculus"
 /mol_type="unassigned DNA"
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Alignment of: us-10-726-967a-1 x AX105389 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
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Total Percent Similarity:	90.00	Total Percent Identity:	80.00

Gaps: 0

Alignment:

22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCCATCTCGGATCGGCTGCCCTTCGACAGCGGCTGGCAGGCCAC 113
 38 OLeuGlyLeu 41
 114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AX573827

Sequence documentation:

LOCUS AX573827 2043 bp DNA linear PAT 07-JAN-2003
 DEFINITION Sequence 7 from Patent EP1249496.
 ACCESSION AX573827
 VERSION AX573827.1 GI:27551479
 KEYWORDS

SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
AUTHORS 1
TITLE Gurney, M. and Bienkowski, M.J.
JOURNAL Alzheimer's disease secretase, app substrates therefor, and uses therefor
Patent: EP 1249498-A 7 16-OCT-2002;
PHARMACIA & UPJOHN COMPANY (US)
FEATURES
source
1..2043
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/mol_type="unassigned DNA"
/db_xref="taxon:10090"
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Alignment segment 1/1: (+)
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Matching Percent Similarity: 90.00
Total Percent Similarity: 90.00
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Total Percent Identity: 80.00
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64 ACCATCTCGGCATCCGGCTGCCCTTCGCAGCGGCTGCAGGGCCACC 113
38 OLeuGlyLeu 41
114 CTGGGGCCCTG 123
Sequence name: rgep2ndb:AF200346
Sequence documentation:
LOCUS AF200346 2043 bp mRNA linear ROD 12-DEC-1999
DEFINITION Mus musculus aspartyl protease 2 mRNA, complete cds.
ACCESSION AF200346
VERSION AF200346.1 GI:6561819
KEYWORDS
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
AUTHORS 1 (bases 1 to 2043)
TITLE Van, R., Bienkowski, M.J., Shuck, M.E., Mao, H., Tony, M.C.,
JOURNAL Pauley, A.M., Braisher, J.R., Stratman, N.C., Mathews, W.R., Buhl, A.E.,
Gurney, D.B., Tomasselli, A.G., Parodi, L.A., Heinrichson, R.L. and
Gurney, M.E.
TITLE Membrane-anchored aspartyl protease with Alzheimer's disease
beta-secretase activity
JOURNAL Nature 402 (6761), 533-537 (1999)
MEDLINE 20057170
PUBMED 10591213
REFERENCE 2 (bases 1 to 2043)
AUTHORS Bienkowski, M.J., Shuck, M.E., Slightom, J.L. and Drong, R.F.
TITLE Direct Submission
JOURNAL Submitted (29-OCT-1999) Genomic Research, PharmaciatUpjohn, 301
Hennietter, Kalamazoo, MI 49007, USA
FEATURES
source
1..2043
/organism="Mus musculus"
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1..1506
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/db_xref="GI:6561820"

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KETDESSEGRGSGFVENVDNRKSGGGYIVETVGSFPQTLLNLTDTGSSNFVAG
AAPHPRLHYVQRQSLSTYRDLRKGVYVYTGKMGELGTLSIIPHPNVTVRANI
AAITBEDKRFINSNMEGILGLAYELIAPDDSLBEPFSLVKQTHIPNIPSLQCGA
GFLNQTETALSVSGSMIGIDHSLYTSLWYTPPIRREYEVILIVREINGDLKM
DCKEYVDSIVDSGTTNLRPKVPEAARVSKIAASREKPEPDVFWGEOLVCMQAG
TTPNMTFPIVSLIGEYVNTQSPRTIILPQOILRPEDVATSDQDCYKFAVSSSTGT
VGAIVMEGFYVVFEDARKRIRIPANVACHVDEPRTIAYEGFPVTDMECDGYNIPQT
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Alignment of: us-10-726-967a-1 x AF200346 ..
Alignment segment 1/1: (+)
Matching length: 77.00
Matching Percent Similarity: 90.00
Total Percent Similarity: 90.00
Total length: 80.00
Total Percent Identity: 80.00
Gaps: 0
Alignment:
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCATCTCGGCATCCGGCTGCCCTTCGCAGCGGCTGCAGGGCCACC 113
38 OLeuGlyLeu 41
114 CTGGGGCCCTG 123
Sequence name: rgep2ndb:AX401989
Sequence documentation:
LOCUS AX401989 2158 bp DNA linear PAT 06-JUN-2002
DEFINITION Sequence 1665 from Patent WO0210453.
ACCESSION AX401989
VERSION AX401989.1 GI:21338169
KEYWORDS
SOURCE Rattus norvegicus (Norway rat)
ORGANISM Rattus norvegicus
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
AUTHORS 1
TITLE Mendrick, D., Porter, M.W., Johnson, K.R., Castle, A.L. and
JOURNAL Elashoff, M.R.
TITLE Molecular toxicology modeling
JOURNAL Patent: WO 0210453-A 1665 07-FEB-2002;
Gene Logic, Inc. (US)
FEATURES
source
1..2158
/organism="Rattus norvegicus"
/mol_type="unassigned DNA"
/db_xref="taxon:10116"
/note="EMBL/GenBank Accession No. NM_019204"
Alignment of: us-10-726-967a-1 x AX401989 ..
Alignment segment 1/1: (+)
Matching length: 77.00
Matching Percent Similarity: 90.00
Total Percent Similarity: 90.00
Total length: 80.00
Total Percent Identity: 80.00
Gaps: 0
Alignment:
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
491 ACCATCTCGGCATCCGGCTGCCCTTCGCAGCGGCTGCAGGGCCACC 540
38 OLeuGlyLeu 41

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541 CTTGGGCGCTG

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Sequence name: rgep2ndb:AF190727

Sequence documentation:

LOCUS AF190727 2158 bp mRNA linear ROD 26-OCT-1999

DEFINITION Rattus norvegicus beta-site APP cleaving enzyme (Bace) mRNA,

complete cds.

ACCESSION AF190727 GI:6118542

VERSION AF190727.1

KEYWORDS

Rattus norvegicus (Norway rat)

Rattus norvegicus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;

Rattus.

REFERENCE 1 (bases 1 to 2158)

AUTHORS

Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,

Denis, P., Teplow, D.B., Ross, S., Amarante, P., Loeb, R., Luo, Y.,

Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,

Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,

Teanor, J., Rogers, G. and Citron, M.

Beta-secretase cleavage of Alzheimer's amyloid precursor protein by

the transmembrane aspartic protease BACE

Science 286 (5440), 735-741 (1999)

JOURNAL

MEDLINE

PUBMED

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

SOURCE

1. 2158

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/mol_type="RNA"

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1. 2158

/gene="Bace"

428. 1933

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RETDEPEERGRGSEFVEMVDNRKSGQGYVETMGSPPTLNLIVDTSSNFAVG

AAPPLHRYRQSLSTVDLRSYVYPYQGWKEGLDGLTSLIPHGNTVIRAVI

AATBSDKPRINSNMGILGLAVETARPDDSLPPRDSIVKOTHPNIFSLQGA

GFLPNOTBALASVGSNITIGIHSLYTGSLMTPTPRRETYEIVIRVAINQDLKM

DCKEYNDKSIIVSGTTLRLPKKVFPAVAKSIKASSTKPKPGKGLQVCMQNG

TTPWNIIPVLSILMGVTNQSPRITLLPOVLRPVVDVATSDDCYKFGSLQVCMQNG

VMGAVIMEGFYVDFRARKRIGFAVSACHVDFRPAVAGPVTADMEDCGYNIQT

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Alignment of: us-10-726-967a-1 x AF190727

Alignment segment 1/1: (+)

Quality: 77.00

Matching length: 20

Total length: 20

Matching Percent Similarity: 90.00

Total Percent Identity: 80.00

Total Similarity: 90.00

Total Percent Identity: 80.00

Gaps: 0

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

491 ACCCATCTCGGATCCGACTGCCCTTCGACGCGCTGGCAGGCGCACCC 540

38 OleuGlyLeu 41

|||||
541 CTTGGGCGCTG

550

Sequence name: rgep2ndb:CQ824595

Sequence documentation:

LOCUS CQ824595 3880 bp RNA linear PAT 21-JUN-2004

DEFINITION Sequence 22 from Patent WO2004047872.

ACCESSION CQ824595

VERSION CQ824595.1

KEYWORDS

Mus musculus (house mouse)

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE 1

AUTHORS

Kaemmerer, W.F.

Treatment of neurodegenerative disease through intracranial

delivery of siRNA

Patent: WO 2004047872-A 22 10-JUN-2004;

Medtronic, Inc. (US)

Location/Qualifiers

1. 3880

/organism="Mus musculus"

/mol_type="unassigned RNA"

/db_xref="taxon:10090"

/note="LOCUS Bace 3880 bp mRNA linear R OD 07-JAN-2002

DEFINITION Mus musculus beta-site APP cleaving enzyme

(Bace), nr NA. ACCESSION NM_011792; VERSION NM_011792.2

GI:6857758"

Alignment of: us-10-726-967a-1 x CQ824595

Alignment segment 1/1: (+)

Quality: 77.00

Matching length: 20

Total length: 20

Matching Percent Similarity: 90.00

Total Percent Identity: 80.00

Total Similarity: 90.00

Total Percent Identity: 80.00

Gaps: 0

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

491 ACCCATCTCGGATCCGACTGCCCTTCGACGCGCTGGCAGGCGCACCC 540

38 OleuGlyLeu 41

541 CTTGGGCGCTG 550

Sequence name: rgep2ndb:AF190726

Sequence documentation:

LOCUS AF190726 3880 bp mRNA linear ROD 27-JAN-2000

DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace) mRNA, complete

cds.

ACCESSION AF190726

VERSION AF190726.2

KEYWORDS

Mus musculus (house mouse)

SOURCE

ORGANISM

REFERENCE

AUTHORS

1 (bases 1 to 3880)

Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,

Denis, P., Teplow, D.B., Ross, S., Amarante, P., Loeb, R., Luo, Y.,

Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,

Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,

Teanor, J., Rogers, G. and Citron, M.

Beta-secretase cleavage of Alzheimer's amyloid precursor protein by

the transmembrane aspartic protease BACE

JOURNAL Science 286 (5440), 735-741 (1999)
 MEDLINE 20002972
 PUBMED 10531052
 REFERENCE 2 (bases 1 to 3880)
 AUTHORS Bennett, B.D., Vassar, R. and Citron, M.
 TITLE Direct Submission
 JOURNAL Submitted (29-SEP-1999) Neuroscience, Amgen Inc., One Amgen Center Dr., Thousand Oaks, CA 91320-1799, USA
 REFERENCE 3 (bases 1 to 3880)
 AUTHORS Bennett, B.D., Vassar, R. and Citron, M.
 TITLE Direct Submission
 JOURNAL Submitted (27-JAN-2000) Neuroscience, Amgen Inc., One Amgen Center Dr., Thousand Oaks, CA 91320-1799, USA
 REMARK Sequence update by submitter
 COMMENT On Jan 27, 2000 this sequence version replaced gi:6118540.
 FEATURES
 source
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 /db_xref="taxon:10090"
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 1.3880
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 CDS
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 /db_xref="GI:6760477"
 /translation="MAPALHWLLWVGSGMLPAQGTHTLGIPLRSGLAGPLGLRLP
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 AATTESDKPINSNMEGILGLAVARPDLSLEPPPSIVQTHIPNIFSLDCA
 GFLPNTALASVSGSMITGIDHSIYTSGLMTPTPRRERYVITIVREINQDQK
 DCEKIVYDSIVDSITNLKLPKRVFAAKYSIKASSTKFPDGLSGLQWQAG
 TTPWNTFPIVSLTGMGVNQSFRITLPGQYLRPVADVATSCDDYKKAIVSGSSTGT
 VMGAVMEGRYVYFRRARKIIGFAVACVHDEFRTAAVGGPVTADMEPCGYNIPOT
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Alignment of: uc-10-726-967a-1 x AF190726 ..
 Alignment segment 1/1: (+)
 Quality: 77.00
 Matching length: 20
 Matching Percent: 90.00
 Total Similarity: 90.00
 Total Percent Identity: 80.00
 Gaps: 0

Alignment:
 22 ThrGlnHisGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
 491 ACCCATCTCGGCATCTCGGCTGCGAGCGGCGGCGCACCC 540
 38 OleuGlyLeu
 541 CCTGGGCGCTG 41
 550

Sequence name: rgep2ndb:BC048189

Sequence documentation:
 LOCUS BC048189 4059 bp mRNA linear ROD 30-JUN-2004
 DEFINITION Mus musculus beta-site APP cleaving enzyme 1, mRNA (cDNA clone
 MGC:61419 IMAGE:6831622), complete cds.
 ACCESSION BC048189
 VERSION BC048189.1 GI:29165766
 KEYWORDS MGC.
 SOURCE Mus musculus (house mouse)
 ORGANISM Mus musculus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 1 (bases 1 to 4059)
 Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shennan, C.M., Schuler, G.D.,
 Altshul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bat, N.K.,
 Hopkins, R.E., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
 Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
 Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
 Scheetz, T.E., Brownstein, M.J., Ueda, T.B., Toshiyuki, S.,
 Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
 Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
 McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richard, S.,
 Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulik, S.M.,
 Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
 Fahey, J., Helton, E., Kettelman, M., Madan, A., Rodriguez, S.,
 Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
 Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
 Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
 Butlerfield, Y.S., Krzywinski, M.I., Skalska, U., Smalins, D.E.,
 Scherch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
 Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences
 Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

JOURNAL
 PUBMED 12477932
 REFERENCE 2 (bases 1 to 4059)
 AUTHORS Strausberg, R.
 TITLE Direct Submission
 JOURNAL Submitted (06-MAR-2003) National Institutes of Health, Mammalian
 Gene Collection (MGC), Cancer Genomics Office, National Cancer
 Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
 USA
 NIH-MGC Project URL: <http://mgc.nci.nih.gov>
 Contact: MGC help desk
 Email: cgabs-rt@mail.nih.gov
 Tissue Procurement: Dr. Jim Lin, University of Iowa
 CDNA Library Preparation: M. Bento Soares, University of Iowa
 CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LNL)
 DNA Sequencing by: University of Iowa, Dr. M. Bento Soares and Dr.
 Thomas L. Casavant.
 Web site: <http://genome.uiowa.edu>
 Contact: bento-soares@uiowa.edu; tom-casavant@uiowa.edu
 Bonaldo, M.F., Akabogu, I., Bair, T., Bair, J., Crouch, K., Davis, A.,
 Fishler, K., Keppel, C., Kucaba, T., Lebeck, M., Melo, A., Schaefer, K.,
 Scheetz, T., Smith, C., Smith, E., Tack, D., Trout, K., Walters, J.,
 Casavant, T., Soares, M.B.

Clone distribution: MGC clone distribution information can be found
 through the I.M.A.G.E. Consortium/LNL at: <http://image.lnl.gov>
 Series: Plate: Row: Column: 0
 This clone was selected for full length sequencing because it
 passed the following selection criteria: Hexamer frequency ORF
 analysis.

FEATURES
 source
 1.4059
 /organism="Mus musculus"
 /mol_type="mRNA"
 /strain="C57BL/6"
 /db_xref="taxon:10090"
 /clone="MGC:61419 IMAGE:6831622"
 /tissue_type="Brain, mouse, 13.5, 14.5, 16.5, 17.5 dpc"
 /clone_id="N1H BMAP_FY0"
 /lab_host="DH10B"
 /lab_host="DH10B"
 /lab_host="DH10B"
 /note="vector: pYX-ASC"
 1.4059
 /gene="Bace1"
 /db_xref="locusID:23821"
 /db_xref="MGI:1346542"
 426..1931
 /gene="Bace1"
 /codon_start=1
 /product="beta-site APP cleaving enzyme 1"
 /protein_id="AAH48189.1"
 /db_xref="GI:29165767"
 /db_xref="locusID:23821"
 /db_xref="MGI:1346542"
 /translation="MAPALHWLLWVGSGMLPAQGTHTLGIPLRSGLAGPLGLRLP"

REMARK NIH-MGC Project URL: <http://mgc.ncl.nih.gov>
 COMMENT Contact: MGC help desk
 Email: cgabs-remail.nih.gov
 Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
 CDNA Library Preparation: Michael J. Brownstein (NHGRI) & Shiraki
 Toshiyuki and Piero Carninci (RIKEN)
 DNA Library Arrayed by: The I.M.A.G.E. Consortium (LNLN)
 Center, Stanford University School of Medicine, Stanford, CA 94305
 Web site: <http://www.sngc.stanford.edu>
 Contact: (Dickson, Mark) mcdpaxil@stanford.edu
 Dickson, M., Schmutz, J., Grimwood, J., Rodriguez, A., and Myers,
 R. M.

Clone distribution: MGC clone distribution information can be found
 through the I.M.A.G.E. Consortium/LNLN at: <http://image.lnl.gov>
 Series: IRAC Plate: 48 Row: P Column: 18
 This clone was selected for full length sequencing because it
 passed the following selection criteria: matched mRNA gi: 21040369.

FEATURES

source
 1.2174
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /clone="MGC:33762 IMAGE:5311572"
 /issue_type="Brain, hypothalamus"
 /clone_lib="NIH_MGC_96"
 /lab_host="DH10B"
 /note="Vector: pBluescript"
 1.2174
 /gene="BACE1"
 /note="synonyms: ASP2, HSPC104, KIAA1149, BACE"
 /db_xref="locusid:23621"
 /db_xref="MIM:604252"
 457.1962
 /gene="BACE1"
 /codon_start=1
 /product="beta-site APP-cleaving enzyme 1, isoform A
 preproprotein"
 /protein_id="AAH36084.1"
 /db_xref="GI:23273579"
 /db_xref="LocusID:23621"
 /db_xref="MIM:604252"
 /translation="MAQALPMLLMAGAVLPAHGTQHGRLPLRSGLGAPLGLRLP
 RERDERBERGRGSPVEMVDNLRKSGGQYVGMVSPQPTLIVDTGSSNFAVG
 AAPHPLRLRYQRLQSTYRDLRKGYVPTQKMGSELDTVSIPIHGNVYVRNT
 AATLSDKTFPINSNMEGLGLAVAIARDPDSLPPFSLVQTHVPLFSLQCLGA
 GPPLNQSEVLASVSGSMITGGIDHSLYTGSLWYTPLRREMYEVIIIVREINGQDLKM
 DCEKENVYKSIIVSGTNNLRPKVFEAAVKSIAKASTKPDGFWLGSOLVQWQAG
 TTPMNIPEVYSLVLMGEVNTQSPRITLIPQOYLRPVDAVTSODDCYKALISQSSSTGT
 VMGAVIMEGPIVYVPRARKRIGPAVSAHVHDFRPAVAAGPVTITLDMEDCGNIPQT
 DESTLMTIAYMAICALPMLPLCLMVCQMRCLRCRQHDHPADISILK"

CDS

Alignment of: uc-10-726-967a-1 x BC036084 ..
 Alignment segment 1/1: (-)

Quality:	35.50	Score:	268
Matching length:	17	Total length:	24
Matching Percent Similarity:	70.59	Matching Percent Identity:	64.71
Total Percent Similarity:	50.00	Total Percent Identity:	45.83
Gaps:	1		

Alignment:

25 GATTCGAGGAGCCGCTACATCGGCGGCGCAGCTGGCAGCG 36
 |||||
 240 GATTCGAGGAGCCGCTACATCGGCGGCGCAGCTGGCAGCG 191
 |||||
 37AlaProLeuGlyLeu 41
 |||||
 190 GCGCGGCGCCCGCGGCGGCGCTG 169

Sequence name: rgep2nd:AX700446

Sequence documentation:
 LOCUS AX700446 2526 bp DNA linear PAT 03-APR-2003
 DEFINITION Sequence 1 from Patent WO03012089.
 ACCESSION AX700446
 VERSION AX700446.1 GI:29536237
 KEYWORDS
 SOURCE Homo sapiens (human)
 ORGANISM

REFERENCE

1
 AUTHORS Yon, J., Cleasby, A., Bruinzeel, W.D., Masure, S.L., Tickie, I. and
 Shariff, A.
 TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use
 thereof
 JOURNAL Patent: WO 03012089-A 1 13-FEB-2003;
 Astex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)
 FEATURES
 source
 1.2526
 /organism="Homo sapiens"
 /mol_type="unassigned DNA"
 /db_xref="taxon:9606"

Alignment of: uc-10-726-967a-1 x AX700446 ..
 Alignment segment 1/1: (-)

Quality:	35.00	Score:	271
Matching length:	14 <td>Total length:</td> <td>14 </td>	Total length:	14
Matching Percent Similarity:	64.29 <td>Matching Percent Identity:</td> <td>57.14 </td>	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29 <td>Total Percent Identity:</td> <td>57.14 </td>	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GATTCGAGGAGCCGCTACATCGGCGGCGCAGCT 38
 |||||
 237 GATTCGAGGAGCCGCTACATCGGCGGCGCAGCT 196
 |||||

Sequence name: rgep2nd:AF190725

Sequence documentation:
 LOCUS AF190725 2526 bp mRNA linear PRI 26-OCT-1999
 DEFINITION Homo sapiens beta-site APP cleaving enzyme (BACE) mRNA, complete
 CDS.
 ACCESSION AF190725
 VERSION AF190725.1 GI:6118538
 KEYWORDS
 SOURCE Homo sapiens (human)
 ORGANISM

REFERENCE

1 (bases 1 to 2526)
 AUTHORS Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,
 Denis, P., Teplow, D.B., Ross, S., Amarante, P., Loeloff, R., Luo, Y.,
 Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,
 Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,
 Treanor, J.J., Rogers, G. and Citron, M.
 TITLE Beta-secretase cleavage of Alzheimer's amyloid precursor protein by
 the transmembrane aspartic protease BACE
 JOURNAL Science 266 (5440), 735-741 (1999)
 MEDLINE 20002972
 PUBMED 10531052

REFERENCE

2 (bases 1 to 2526)
 AUTHORS Bennett, B.D., Vassar, R. and Citron, M.
 TITLE Direct Submission
 JOURNAL Submitted (29-SEP-1999) Neuroscience, Amgen Inc., One Amgen Center
 Dr., Thousand Oaks, CA 91320-1799, USA
 FEATURES
 source
 1.2526
 /organism="Homo sapiens"

gene /mol_type="mRNA"
/db_xref="taxon:9606"
1..2526
/gene="BACE"
454..1959
/gene="BACE"

/product="beta-site APP cleaving enzyme"
/protein_id="AA04142.1"
/db_xref="GI:6118539"
/translation="MAQALPMLLMGAGVLPAGHTQHGRLPLRSLGAGPGLRLP
RETDEBERGRGSRFVEMVDNLRKSGGQGYVEMTVGSPPTLNLIVDSSNFAVG
AAPHPLHRYQRLSTYRDLRKGVVPTQGWGELGTLVSIIPHGNVYRAI
AATBSPKPFINSNMGGITGLAYAIARPDLSPEFPDLSVQTHVPIPSIOLCA
GFLNDSVLASVGSMTIGIDHSLTYSLWTPIRREYEVITVREINQDLK
DCEKYNDKSIIVDSGTNLRPKFVPAVKSIIKAASSTKFPDGLVGLQVCMWG
TTPWNIFFPVISLYLMEGVNOSFRITLIPQYLRPVEDVATSDCCYKFAISOSTGT
VMGAVIMEGYVVDRAKRIQFVAVSACHVDEFRPAVAGPFTLDMEDCGYNIPT
DESTLMTIAYVMAICALFPLPLCLMVCQWRCLRCRQHQHDPADIDSLLK"

Alignment of: us-10-726-967a-1 x AP190725 ..

Alignment segment 1/1: (-)

Matching Percent	Similarity	Quality	Length	Score
64.29	64.29	35.00	14	271
Total Percent	Similarity	64.29	Total Length	57.14
		Gaps:	0	Total Percent Identity
				57.14

Alignment:

25 Gly11eArqLeuProLeuArgSerGlyLeuGlyAlaPro 38
237 GGATCCGAGCGCCCTACATCGCAGCGCGCGCACCT 196

Sequence name: rgep2ndb:BC065492

Sequence documentation:

LOCUS BC065492 3893 bp mRNA linear PRI 30-JUN-2004
DEFINITION Homo sapiens beta-site APP-cleaving enzyme 1, transcript variant a,
mRNA (cDNA clone MGC:71162 IMAGE:6538154), complete cds.
ACCESSION BC065492.1 GI:41350853
VERSION BC065492.1 GI:41350853
KEYWORDS MGC.

SOURCE Homo sapiens (human)

ORGANISM

REFERENCE

AUTHORS

1 (bases 1 to 3893)
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Heile, F.,
Datchenko, L., Marsina, K., Parker, A.A., Rubin, G.M., Hong, L.,
Sapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Schaefer, T.E., Brownstein, M.J., Ueda, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raja, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullaly, S.J., Bosak, S.A., McEwan, P.J.,
Morken, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Vallalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahy, J., Helton, E., Kettelman, M., Madan, A., Rodriguez, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywicki, M.I., Skalske, U., Smalls, D.E.,
Schnerch, A., Schein, J.E., Jones, S.U. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
JOURNAL
PUBMED
12477932
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

2 (bases 1 to 3893)

AUTHORS

Strausberg, R.
Direct Submission
Submitted (26-JAN-2004) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
USA

TITLE

NIH-MGC Project URL: <http://mgc.nci.nih.gov>

JOURNAL

Contact: MGC help desk
Email: cgaps-remail.nih.gov
Tissue Procurement: ATCC
CDNA Library Preparation: Rubin Laboratory
DNA Sequencing by: The I.M.A.G.E. Consortium (LNL)
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: <http://www.nisc.nih.gov/>
Contact: nisc_mgc@hgrl.nih.gov
Ahter, N., Aylet, K., Beckstrom-Sternberg, S.M., Benjamin, B.,
Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S.,
Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P.,
Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R.,
Maduro, Q.L., Mastello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C.,
McDowell, J., Pearson, R., Stantropop, S., Thomas, P.J., Touchman, J.W.,
Teurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L.,
Young, A., Zhang, L.-H. and Green, E.D.

REMARK

Clone distribution: MGC clone distribution information can be found
through the I.M.A.G.E. Consortium/ILNL at: <http://image.llnl.gov>
Series: IRAL Plate: 50 Row: n Column: 6
This clone was selected for full length sequencing because it
passed the following selection criteria: matched mRNA gi: 21040369.

FEATURES

Source

1..3893
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="MGC:71162 IMAGE:6538154"
/cissue_type="lung, epidermoid carcinoma"
/clone_id="NIH_MGC_101"
/lab_host="DH10B"
/note="Vector: POTB7"

gene

1..3893
/gene="BACE1"
/note="synonyms: ASP2, HSPC104, KIAA1149, BACE"

CDS

462..1967
/db_xref="MIM:604252"
/gene="BACE1"
/codon_start=1
/product="beta-site APP-cleaving enzyme 1, isoform A
preproprotein"

/protein_id="AA04142.1"
/db_xref="GI:41350854"
/db_xref="LOCUSID:23621"
/db_xref="MIM:604252"

/translation="MAQALPMLLMGAGVLPAGHTQHGRLPLRSLGAGPGLRLP
RETDEBERGRGSRFVEMVDNLRKSGGQGYVEMTVGSPPTLNLIVDSSNFAVG
AAPHPLHRYQRLSTYRDLRKGVVPTQGWGELGTLVSIIPHGNVYRAI
AATBSPKPFINSNMGGITGLAYAIARPDLSPEFPDLSVQTHVPIPSIOLCA
GFLNDSVLASVGSMTIGIDHSLTYSLWTPIRREYEVITVREINQDLK
DCEKYNDKSIIVDSGTNLRPKFVPAVKSIIKAASSTKFPDGLVGLQVCMWG
TTPWNIFFPVISLYLMEGVNOSFRITLIPQYLRPVEDVATSDCCYKFAISOSTGT
VMGAVIMEGYVVDRAKRIQFVAVSACHVDEFRPAVAGPFTLDMEDCGYNIPT
DESTLMTIAYVMAICALFPLPLCLMVCQWRCLRCRQHQHDPADIDSLLK"

Alignment of: us-10-726-967a-1 x BC065492 ..

Alignment segment 1/1: (-)

Matching Length	Quality	Score
64.29	35.00	272
Total Percent	Similarity	64.29
		Total Length
		57.14
		Total Percent Identity
		57.14


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LOCUS       AX364933                5757 bp    DNA             linear      PAT 15-FEB-2002
DEFINITION  Sequence 84 from Patent WO0206315.
ACCESSION   AX364933
VERSION     AX364933.1  GI:18696823
KEYWORDS
SOURCE      Homo sapiens (human)
ORGANISM    Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Mintz,L., Freilich,S. and Bernstein,J.
  TITLE     Novel nucleic acid and amino acid sequences
  JOURNAL   Patent: WO 0206315-A 84 24-JAN-2002;
            Compugen Ltd.(IL)
FEATURES             Location/Qualifiers
     source          1..5757
                     /organism="Homo sapiens"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:9606"
Alignment of: us-10-726-967a-1 x AX364933      ..
Alignment segment 1/1: (--)
      Quality:      35.00                      Escape:      273
      Matching length: 14                      Total length: 14
      Matching Percent Similarity: 64.29          Matching Percent Identity: 57.14
      Total Percent Similarity: 64.29            Total Percent Identity: 57.14
      Gaps:                                0
Alignment:
      25 GYIIIEArgLeuProLeuArgSerGlyLeuGlyAlaPro          38
          |||||::|||:::|||||
      238 GGGATCGGAGGCCCGCTACATCGGCACGGGGCGCGACGCT      197
Sequence name: rsep2ndb.AB032975

Sequence documentation:
LOCUS       AB032975                5814 bp    mRNA             linear      PRI 17-MAY-2001
DEFINITION  Homo sapiens mRNA for KIAA1149 protein, partial cds.
ACCESSION   AB032975
VERSION     AB032975.2  GI:14133242
KEYWORDS
SOURCE      Homo sapiens (human)
ORGANISM    Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1 (bases)
  AUTHORS   Hirosewa,M., Nagase,T., Ishikawa,K., Kikuno,R., Nomura,N. and
            Ohara,O.
  TITLE     Characterization of cDNA clones selected by the Genemark analysis
            from size-fractionated cDNA libraries from human brain
  JOURNAL   DNA Res. 6 (5), 329-336 (1999)
MEDLINE     20039618
PUBMED      10574461
     2 (bases 1 to 5814)
     Ohara,O., Nagase,T. and Kikuno,R.
     Direct Submission
     Submitted (04-OCT-1999) Osamu Ohara, Kazusa DNA Research Institute,
     Laboratory of DNA Technology, 1532-3 Yana, Kisarazu, Chiba
     292-0812, Japan (E-mail:cdna1f@okazusa.or.jp,
     URL:http://www.kazusa.or.jp/huge/, Tel:+81-438-52-3913,
     Fax:+81-438-52-3914)
     On May 17, 2001 this sequence version replaced gi:6330044.
COMMENT
FEATURES
     source          1..5814
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="fg04087"
                     /sex="male"
                     /tissue_type="brain"

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gene
CDS

/clone_lib="pbunescriptit SK plus"
/dex_stage="adult"
/note="vector:pbunescriptit SK plus. This sequence is replaced that of hg01289 cDNA as a representative CDNA sequence for KIAA1149"

1..5814
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<351..1949
/gene="KIAA1149"
/note="Start codon is not identified."
/codon_start=1
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/db_xref="GI:14133243"
/translation="EATSTQTQWGAQPTDVGCCEPRGEPGRPEPCPGSCCGNANRECCITPAIPSTASGCCPAAAGAPLRLPRETDEBPBEGRGSEVEMVDNRGKSGGCVGVETVGSPPQTLNIIVDTSSNFVAAPHPLHRYYORQLSTYADLRGVAVPYQVKGMEGLGDLVISIPHGPVTVRANIATIESDKFINSNMEEIGLAAYAEARPDLSLEPPRPSLVKOTHPNLFSLOLCAGAPRIINSEVALSVSGSMIIGDHSILYTGSLMTPIRRREWTYEITYIRVEINQDDLKMDCKRYDKSYDSGTNNLRPKRVFEAAVYSIASASTSTEKPDPGFMLEQVLGWQAGTPWNLFPIISLYLMGEVNQSFRITITLPQOYLIRPVEDVATSODCYKFALISOESTGTVMGAVIMEGYVFEDARKRIGFAVSANACHVIDERTVAIEGPFVTIDMEDGVNI PQIDEISTLTITAYMAICALFWLPLCLMWQQWRCLRCLAQHQDDFPADDISLTK"

Alignment of: us-10-726-967a-1 x AB032975 ..
Alignment segment 1/1: (-)
Matching Quality: 35.00 Score: 273
Total Length: 14
Matching Percent Similarity: 64.29 Matching Percent Identity: 57.14
Total Percent Similarity: 64.29 Total Percent Identity: 57.14
Gaps: 0

Alignment:
25 GYIIIEArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
226 GGATCCGAGCCCGCTACATCGCACGGCGGCGCAACT 185

Sequence name: rgep2ndb:CQ824591

Sequence documentation:
LOCUS CQ824591 5832 bp RNA linear PAT 21-JUN-2004
DEFINITION Sequence 18 from Patent WO200404047872.
ACCESSION CQ824591
VERSION CQ824591.1 GI:49021626
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.

REFERENCE
AUTHORS Kaemmerer,W.P.
TITLE Treatment of neurodegenerative disease through intracranial delivery of sirna
JOURNAL Patent: WO 2004047872-A 18 10-JUN-2004;
Medronic, Inc. (US)

FEATURES
source Location/Dualifiers
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/db_xref="taxon:9606"
1..5832
/note="ACCESSION NM_012104 VERSION NM_012104.2 GI:21040369 LOCUS BACE 5832 bp mRNA Linear PRI 05-NOV-2002 DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr anscrip t variant a, mRNA."

Alignment of: us-10-726-967a-1 x CQ824591 ..
Alignment segment 1/1: (-)

Alignment of: us-10-726-967a-1 x AR404205 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	275
Matching length:	14	Total length:	14
Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14

Alignment:

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25 G|Y|I|e|A|g|L|e|u|P|r|o|L|e|u|A|g|S|e|r|G|y|L|e|u|g|y|L|a|P|r|o
|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||
1458 GGGATCCGAGACCCGCTACATCGGACGCGGCGGCGGACCT

```

Sequence name: rgep2ndb:AX401989

Sequence documentation:

LOCUS AX401989 2158 bp DNA linear PAT 06-JUN-2002
 DEFINITION Sequence 1665 from Patent WO0210453.
 ACCESSION AX401989
 VERSION AX401989.1 GI:21338169
 KEYWORDS
 SOURCE Rattus norvegicus (Norway rat)
 ORGANISM Rattus norvegicus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
 Rattus.

REFERENCE
 1 Mendrick, D., Porter, M.W., Johnson, K.R., Castle, A.L. and
 Elashoff, M.R.
 TITLE Molecular toxicology modeling
 JOURNAL Patent: WO 0210453-A 1665 07-FEB-2002;
 Gene Logic, Inc. (US)
 FEATURES
 source 1..2158
 location/Qualifiers
 1..2158
 /organism="Rattus norvegicus"
 /mol_type="unassigned DNA"
 /db_xref="taxon:10116"
 /note="EMBL/GenBank Accession No. NM_019204"

Alignment of: us-10-726-967a-1 x AX401989 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	278
Matching length:	14	Total length:	14
Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00

Alignment:

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23 G|N|H|s|g|L|y|I|e|A|g|L|e|u|P|r|o|L|e|u|A|g|S|e|r|G|y|L|e|u|g|y|L|
|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||
182 CAGCGGGGAGTCGAGCCCTTGCGGCGCTGAGAGGCGGG

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Sequence name: rgep2ndb:AF190727

Sequence documentation:

LOCUS AF190727 2158 bp mRNA linear ROD 26-OCT-1999
 DEFINITION Rattus norvegicus beta-site APP cleaving enzyme (Bace) mRNA,
 complete cds.
 ACCESSION AF190727
 VERSION AF190727.1 GI:6118542
 KEYWORDS
 SOURCE Rattus norvegicus (Norway rat)
 ORGANISM Rattus norvegicus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
 Rattus.

REFERENCE
 1 (bases 1 to 2158)

AUTHORS Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,
 Denis, P., Teplow, D.B., Rose, S., Amaratne, P., Loeboff, R., Luo, Y.,
 Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,
 Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,
 Treanor, J., Rogers, G. and Citron, M.
 TITLE Beta-secretase cleavage of Alzheimer's amyloid precursor protein by
 the transmembrane aspartic protease BACE
 JOURNAL Science 286 (5440), 735-741 (1999)
 MEDLINE 20002972
 PUBMED 10531052

REFERENCE

AUTHORS Bennett, B.D., Vassar, R. and Citron, M.
 TITLE Direct Submission
 JOURNAL Submitted (29-SEP-1999) Neuroscience, Amgen Inc., One Amgen Center
 Dr., Thousand Oaks, CA 91320-1799, USA

FEATURES

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1..2158
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 /db_xref="taxon:10116"
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 428..1933
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 /product="beta-site APP cleaving enzyme"
 /protein_id="AA04144.1"
 /db_xref="GI:6118543"

gene

CDS

Alignment of: us-10-726-967a-1 x AF190727 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	278
Matching length:	14	Total length:	14
Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00

Alignment:

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23 G|N|H|s|g|L|y|I|e|A|g|L|e|u|P|r|o|L|e|u|A|g|S|e|r|G|y|L|e|u|g|y|L|
|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||
182 CAGCGGGGAGTCGAGCCCTTGCGGCGCTGAGAGGCGGG

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Sequence name: rgep2ndb:C0824595

Sequence documentation:

LOCUS C0824595 3880 bp RNA linear PAT 21-JUN-2004
 DEFINITION Sequence 22 from Patent WO2004047872.
 ACCESSION C0824595
 VERSION C0824595.1 GI:49021641
 KEYWORDS
 SOURCE Mus musculus (house mouse)
 ORGANISM Mus musculus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 REFERENCE
 1 Kaemerer, W.F.
 TITLE Treatment of neurodegenerative disease through intracranial
 delivery of siRNA
 JOURNAL Patent: WO 2004047872-A 22 10-JUN-2004;
 Medtronic, Inc. (US)

FEATURES
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Location/Qualifiers
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DEFINITION Mus musculus beta-site APP cleaving enzyme
(Bace), mr. NA. ACCESSION NM_011792; VERSION NM_011792.2
GI:6857758"

Alignment of: us-10-726-967a-1 x CQ824595 ..
Alignment segment 1/1: (-)
Quality: 33.00
Matching length: 14
Matching Percent Similarity: 64.29
Total Percent Similarity: 64.29
Total Percent Identity: 50.00
Gaps: 0

Sequence name: rgep2ndb:AF190726
Sequence documentation:
LOCUS AF190726 3880 bp mRNA linear ROD 27-JAN-2000
DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace) mRNA, complete
cds
AF190726
VERSION AF190726.2 GI:6760476
KEYWORDS
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 3880)
Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,
Dent, P., Teplow, D.B., Ross, S., Amaratne, P., Loeloff, R., Luo, Y.,
Fisher, S., Fuller, J., Edenson, S., Lille, J., Jarosinski, M.A.,
Biere, A.L., Curran, E., Burgess, T., Louis, J.-C., Collins, F.,
Treatnor, J., Rogers, G. and Citron, M.
Beta-secretase cleavage of Alzheimer's amyloid precursor protein by
the transmembrane aspartic protease BACE
Science 286 (5440), 735-741 (1999)

JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
REMARK
COMMENT
FEATURES
source
gene
CDS
Location/Qualifiers
1..3880
/organism="Mus musculus"
/mol_type="mRNA"
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428..1933
/gene="Bace"
/codon_start=1

/product="beta-site APP cleaving enzyme"
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/db_xref="GI:6760477"
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RTDESESEPRGRGSFVEMVDLRLKRSQGVYVETVSPPTLNIIVDTGSSNFAVG
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AAITSDPFLINGSNMEGILGLAYEIAIPDLSLPFIDSLKQCHINIFSLQCGA
GRLNQTALASVSGSMIIGDHLTYGSLWYPTIIRREMYEVIIVVEIIGDPLK
DCKEYNYKSGTSTNLRLPKRYFAVAVSIRKASTEKPDGFMGEOLVQWAG
TTPNAPFVYSIYLNGEYTNQSFRTTIIPQQLRREVDVANSODCYKFAVSSSTGT
VNGAVIMEGFYVDFRARRKIGFAVSACHVDFRFAVEGFVTAADMEDCSYNIPT
DESTLMTIAYMAALCALFMLPLCLMVQCWRCLRLRHQHDFAIDISLLK"

Alignment of: us-10-726-967a-1 x AF190726 ..
Alignment segment 1/1: (-)
Quality: 33.00
Matching length: 14
Matching Percent Similarity: 64.29
Total Percent Similarity: 64.29
Total Percent Identity: 50.00
Gaps: 0

Sequence name: rgep2ndb:BC048189
Sequence documentation:
LOCUS BC048189 4059 bp mRNA linear ROD 30-JUN-2004
DEFINITION Mus musculus beta-site APP cleaving enzyme 1, mRNA (cDNA clone
MGC:61419 IMAGE:6831622), complete cds.
BC048189
VERSION BC048189.1 GI:29165766
KEYWORDS
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 4059)
Straussberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, B., Wagner, L., Shemen, C.M., Schuler, G.D.,
Altshul, S.F., Zeeberg, B., Buetow, K.H., Scheffer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diachenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Cabavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carinici, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hally, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahy, J., Helton, E., Kettelman, M., Madan, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmitz, J., Myers, R.M.,
Butcherfield, Y.S., Krzywinski, M.I., Skalska, U., Smallie, D.E.,
Scherer, A., Schein, J.E., Jones, S.J., and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
REMARK
COMMENT
FEATURES
source
gene
CDS
Location/Qualifiers
2 (bases 1 to 4059)
Straussberg, R.
Direct Submission
Submitted (06-MAR-2003) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
USA
NIH-MGC Project URL: <http://mgc.ncl.nih.gov>

COMMENT

Contact: MGC help desk
 Email: gcgabs-remail.nih.gov
 Tissue Procurement: Dr. Jim Lin, University of Iowa
 cDNA Library Preparation: M. Bento Soares, University of Iowa
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (ILNL)
 DNA Sequencing by: University of Iowa, Dr. M. Bento Soares and Dr. Thomas L. Casavant.
 Web site: <http://genome.uiowa.edu>
 Contact: bentso@uiowa.edu; tom-casavant@uiowa.edu
 Donald, M.F., Akabogu, I., Bait, T., Bait, U., Crouch, K., Davis, A., Fisher, K., Keppel, C., Kucaba, T., Lebeck, M., Melo, A., Schaefer, K., Scheetz, T., Smith, C., Snir, E., Tack, D., Trout, K., Walters, D., Casavant, T., Soares, M.B.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/ILNL at: <http://image.llnl.gov>
 Series: Plate: Row: Column: 0
 This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis.

FEATURES

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1. .4059
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 /mol_type="mRNA"
 /strain="C57BL/6"
 /db_xref="taxon:10090"
 /clone="MGC:61419 IMAGE:6831622"
 /issue_type="Brain, mouse, 13.5,14.5,16.5,17.5 dpc"
 /clone_id="NIH BMAP_FY0"
 /lab_host="DH10B"
 /note="Vector: pYX-ASC"

gene

1. .4059
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 RETDESEBGRGRSFVEMVDNLKSGQGYVEMTGSPPQTLILVDGSSNFVAG
 AAPHPFLHRYQRQLSTYRDLRGVVPYVTOGMEBELGDLVSIHGNVTRANI
 AAITESDKFPLNGSMGILGLAAEIAIPDSDLEPFDSLVKQTHIPNIFSLQDCA
 GFPLNOTBALASVSGSMIGIDHSLYGSIMVPIREMYEVIIVAEINQDLMK
 DCKEYNDKSLVSGCTNLRLPKVFPAASIKAASTKPPGFWLGLQVOMQK
 TTPNNTIPVLSLYMGEVNTNOSFRITTLPPQYLRPVDVATSDDCIKFVSGSSTGT
 VMGAVIMEGFYVDFRARKIIGFVNSACHVDEPRTAVAGPVTALMEQGYNPOT
 DESTLMTIAYVMAICALFMLPLCLMVCWRCLRHQHDHDFADISLTK"

CDS

1. .4059
 /gene="Bace1"
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 RETDESEBGRGRSFVEMVDNLKSGQGYVEMTGSPPQTLILVDGSSNFVAG
 AAPHPFLHRYQRQLSTYRDLRGVVPYVTOGMEBELGDLVSIHGNVTRANI
 AAITESDKFPLNGSMGILGLAAEIAIPDSDLEPFDSLVKQTHIPNIFSLQDCA
 GFPLNOTBALASVSGSMIGIDHSLYGSIMVPIREMYEVIIVAEINQDLMK
 DCKEYNDKSLVSGCTNLRLPKVFPAASIKAASTKPPGFWLGLQVOMQK
 TTPNNTIPVLSLYMGEVNTNOSFRITTLPPQYLRPVDVATSDDCIKFVSGSSTGT
 VMGAVIMEGFYVDFRARKIIGFVNSACHVDEPRTAVAGPVTALMEQGYNPOT
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Alignment of: us-10-726-967a-1 x BC048189 ..
 Alignment segment 1/1: (-)

Quality:	33.00	Score:	280
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

23 GlnHISGLYIleArgLeuProLeuArgSerGlyLeuGLYGLY
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 187 CAGCGGGGAGATCGGCCCCCTTGTGGGCTCGGAGGGGGCGG

Sequence name: rsep2ndb:AB089958

Sequence documentation:

LOCUS AB089958 517 bp mRNA linear PRI 19-AUG-2003

DEFINITION

Homo sapiens BACE mRNA for beta-site APP cleaving enzyme isoform I-127, complete cds.

ACCESSION

AB089958
 AB089958.1 GI:34014375

VERSION

AB089958.1 GI:34014375

KEYWORDS

Homo sapiens (human)

SOURCE

Homo sapiens

ORGANISM

Homo sapiens

REFERENCE

1 Tanahashi, H.
 A novel alternatively spliced isoform of BACE, I-127 induced by cycloheximide treatment

AUTHORS

1 Tanahashi, H.
 A novel alternatively spliced isoform of BACE, I-127 induced by cycloheximide treatment

TITLE

1 Tanahashi, H.
 A novel alternatively spliced isoform of BACE, I-127 induced by cycloheximide treatment

JOURNAL

1 Tanahashi, H.
 A novel alternatively spliced isoform of BACE, I-127 induced by cycloheximide treatment

REFERENCE

2 (bases 1 to 517)
 Tanahashi, H.
 Direct Submission
 Submitted (17-AUG-2002) Hiroshi Tanahashi, National Institute of Neuroscience, Division of Demyelinating Disease and Aging, 4-1-1 Ogawahigashi, Kodaira, Tokyo 187-8502, Japan
 (E-mail: tanahash@ncnp.go.jp, Tel: 81-042-341-2711 (ex. 5163), Fax: 81-042-346-1747)

FEATURES

source

1. .517
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /chromosome="11"
 /map="11q23.2-23.3"
 /cell_line="human neuroblastoma SH-SY5Y"
 /note="I-127 is induced by cycloheximide treatment. Alternative splicing of the RNA occurs at an internal donor in exon 3."

gene

1. .517
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 1..384
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 /db_xref="GI:34014376"
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 RETDESEBGRGRSFVEMVDNLKSGQGYVEMTGSPPQTLILVDGSSNFVAG
 AAPHPFLHRYQRQLSTYRDLRKA"

CDS

1. .517
 /gene="BACE"
 1..384
 /gene="BACE"
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 /product="beta-site APP cleaving enzyme isoform I-127"
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 /db_xref="GI:34014376"
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 AAPHPFLHRYQRQLSTYRDLRKA"

Alignment of: us-10-726-967a-1 x AB089958 ..
 Alignment segment 1/1: (-)

Quality:	32.00	Score:	279
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGLYGLYALA
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 179 AAGCTGCCCTCGGCGGCTCCTCGGCTCT

Sequence name: rsep2ndb:AR224122

Sequence documentation:

LOCUS AR224122 1287 bp DNA linear PAT 26-SEP-2002
 DEFINITION Sequence 50 from patent US 6440698.
 ACCESSION AR224122
 VERSION AR224122.1 GI:23332782
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.
 REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Yan,R. Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6440698-A 50 27-AUG-2002;
FEATURES location/Qualifiers
source 1. .1287
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Alignment of: us-10-726-967a-1 x AR224122 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	281
Matching length:	11	Matching Percent Identity:	11
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Total Percent Similarity:	81.82		
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR269253

Sequence documentation:
LOCUS AR269253 1287 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 50 from patent US 6500667.
ACCESSION AR269253
VERSION AR269253.1 GI:29700221
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Yan,R. Aspartyl protease 2 (Asp2) antisease oligonucleotides
JOURNAL Patent: US 6500667-A 50 31-DEC-2002;
FEATURES location/Qualifiers
source 1. .1287
/organism="unknown"
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Alignment of: us-10-726-967a-1 x AR269253 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	281
Matching length:	11	Matching Percent Identity:	11
Matching Percent Similarity:	81.82	Total Percent Identity:	54.55
Total Percent Similarity:	81.82		
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|
179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR478808

Sequence documentation:
LOCUS AR478808 1287 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 50 from patent US 6699671.
ACCESSION AR478808
VERSION AR478808.1 GI:47237528
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

Unclassified.
REFERENCE 1 (bases 1 to 1287)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Yan,R. Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6699671-A 50 02-MAR-2004;
FEATURES location/Qualifiers
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Alignment of: us-10-726-967a-1 x AR478808 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	281
Matching length:	11	Matching Percent Identity:	11
Matching Percent Similarity:	81.82	Total Percent Identity:	54.55
Total Percent Similarity:	81.82		
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR487374

Sequence documentation:
LOCUS AR487374 1287 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 50 from patent US 6706485.
ACCESSION AR487374
VERSION AR487374.1 GI:47252472
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Yan,R. Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 50 16-MAR-2004;
FEATURES location/Qualifiers
source 1. .1287
/organism="unknown"
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Alignment of: us-10-726-967a-1 x AR487374 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	281
Matching length:	11	Matching Percent Identity:	11
Matching Percent Similarity:	81.82	Total Percent Identity:	54.55
Total Percent Similarity:	81.82		
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|
179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR532014

Sequence documentation:
LOCUS AR532014 1287 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 50 from patent US 6727074.
ACCESSION AR532014
VERSION AR532014.1 GI:53920548
KEYWORDS

Unclassified.

REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Aspartyl protease 2 (Asp2) antitense oligonucleotides
JOURNAL Patent: US 6500667-A 25 31-DEC-2002;
FEATURES Location/Qualifiers

source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269234 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT 87

Sequence name: rgep2ndb:AR478789

Sequence documentation:

LOCUS AR478789 1302 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 25 from patent US 6699671.
ACCESSION AR478789
VERSION AR478789.1 GI:47237509
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1302)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6699671-A 25 02-MAR-2004;
FEATURES Location/Qualifiers

source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478789 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT 87

Sequence name: rgep2ndb:AR487355

Sequence documentation:

LOCUS AR487355 1302 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 25 from patent US 6706485.
ACCESSION AR487355
VERSION AR487355.1 GI:47252453
KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 25 16-MAR-2004;
FEATURES Location/Qualifiers

source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487355 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT 87

Sequence name: rgep2ndb:AR531995

Sequence documentation:

LOCUS AR531995 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6727074.
ACCESSION AR531995
VERSION AR531995.1 GI:53920529
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1302)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6727074-A 25 27-APR-2004;
FEATURES Location/Qualifiers

source 1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531995 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT 87

Sequence name: rgep2ndb:AR540896

Sequence documentation:

LOCUS AR540896 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6737510.
ACCESSION AR540896

[illegible]

LOCUS	AX105407	1302 bp	DNA	linear	PAT 30-APR-2003
DEFINITION	Sequence 25 from Patent WO0123533.				
ACCESSION	AX105407				
VERSION	AX105407.1	GI:13921522			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.				
AUTHORS	1 Gurney,M. and Bienkowski,M.J.				
TITLE	Alzheimer's disease secretase, app substrates therefor, and uses therefor				
JOURNAL	Patent: WO 0123533-A 25 05-APR-2001;				
FEATURES	Pharmacia & Upjohn Company (US)				
source	Location/Qualifiers				
	1..1302				
	/organism="Homo sapiens"				
	/mol_type="unassigned DNA"				
	/db_xref="taxon:9606"				
Alignment of: us-10-726-967a-1 x AX105407 ..					
Alignment segment 1/1: (-)					
	Quality:	32.00	Score:	281	
	Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55		
Total Percent Similarity:	81.82	Total Percent Identity:	54.55		
Gaps: 0					
Alignment:					
	27	ArgLeuProLeuAArgSerGlyLeuGIgLYaLa	37		
	:::		:::		
	119	AAAGCTCCCTCCGGCGGAGCTCTCGGAGCTCT	87		
Sequence name: rgep2ndb:AX573845					
Sequence documentation:					
LOCUS	AX573845	1302 bp	DNA	linear	PAT 07-JAN-2003
DEFINITION	Sequence 25 from Patent EP1249498.				
ACCESSION	AX573845				
VERSION	AX573845.1	GI:27551488			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.				
AUTHORS	1 Gurney,M. and Bienkowski,M.J.				
TITLE	Alzheimer's disease secretase, app substrates therefor, and uses therefor				
JOURNAL	Patent: EP 1249498-A 25 16-OCT-2002;				
FEATURES	Pharmacia & Upjohn Company (US)				
source	Location/Qualifiers				
	1..1302				
	/organism="Homo sapiens"				
	/mol_type="unassigned DNA"				
	/db_xref="taxon:9606"				
Alignment of: us-10-726-967a-1 x AX573845 ..					
Alignment segment 1/1: (-)					
	Quality:	32.00	Score:	281	
	Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55		
Total Percent Similarity:	81.82	Total Percent Identity:	54.55		
Gaps: 0					
Alignment:					

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
119 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 87

Sequence name: rgep2ndb:AX700454

Sequence documentation:

LOCUS AX700454 1302 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 9 from Patent WO03012089.
ACCESSION AX700454
VERSION AX700454.1 GI:29536243
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Yon,J., Cleasby,A., Bruinzeel,W.D., Maure,S.L., Tickle,I. and Sharff,A.
Crystal structure of beta-site app cleaving enzyme (bace) and use thereof

JOURNAL Patent: WO 03012089-A 9 13-FEB-2003.
AUTHORS Astex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES
source 1. .1302
Location/Qualifiers
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700454 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
119 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 87

Sequence name: rgep2ndb:AR224123

Sequence documentation:

LOCUS AR224123 1305 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 52 from patent US 6440698.
ACCESSION AR224123
VERSION AR224123.1 GI:23332783
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6440698-A 52 27-AUG-2002;
FEATURES
source 1. .1305
Location/Qualifiers
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224123 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11

Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR269254

Sequence documentation:

LOCUS AR269254 1305 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 52 from patent US 6500667.
ACCESSION AR269254
VERSION AR269254.1 GI:29700222
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 52 31-DEC-2002;
FEATURES
source 1. .1305
Location/Qualifiers
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269254 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR478809

Sequence documentation:

LOCUS AR478809 1305 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 52 from patent US 6699671.
ACCESSION AR478809
VERSION AR478809.1 GI:47237529
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6699671-A 52 02-MAR-2004;
FEATURES
source 1. .1305
Location/Qualifiers
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478809 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11

Quality: 32.00 Score: 281
Matching Length: 11 Total Length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::: :::|||||:::
179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR487375

Sequence documentation:

LOCUS AR487375 1305 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 52 from patent US 6706485.
ACCESSION AR487375
VERSION AR487375.1 GI:47252473
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and

TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 52 16-MAR-2004;
FEATURES Location/Qualifiers
1..1305
source /organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487375 ..

Alignment segment 1/1: (-)

Quality: 32.00 Score: 281
Matching Length: 11 Total Length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR532015

Sequence documentation:

LOCUS AR532015 1305 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 52 from patent US 6727074.
ACCESSION AR532015
VERSION AR532015.1 GI:53920549
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6727074-A 52 27-APR-2004;
FEATURES Location/Qualifiers
1..1305
source /organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR532015 ..

Alignment segment 1/1: (-)

Quality: 32.00 Score: 281
Matching Length: 11 Total Length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::: :::|||||:::
179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR540916

Sequence documentation:

LOCUS AR540916 1305 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 52 from patent US 6737510.
ACCESSION AR540916
VERSION AR540916.1 GI:53932429
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6737510-A 52 18-MAY-2004;
FEATURES Location/Qualifiers
1..1305
source /organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540916 ..

Alignment segment 1/1: (-)

Quality: 32.00 Score: 281
Matching Length: 11 Total Length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::: :::|||||:::
179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR560126

Sequence documentation:

LOCUS AR560126 1305 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 52 from patent US 6753163.
ACCESSION AR560126
VERSION AR560126.1 GI:53970493
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1305)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6753163-A 52 22-JUN-2004;
FEATURES Location/Qualifiers
1..1305
source /organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560126 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
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179 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX105434

Sequence documentation:

LOCUS AX105434 1305 bp DNA linear PAT 30-APR-2001

DEFINITION Sequence 52 from Patent WO0123533.

ACCESSION AX105434

VERSION AX105434.1 GI:13921542

KEYWORDS

SOURCE synthetic construct

ORGANISM synthetic construct

REFERENCE 1 other sequences, artificial sequences.

AUTHORS Gurney, M. and Bienkowski, M.J.

TITLE Alzheimer's disease secretase, app substrates therefor, and uses

JOURNAL Patent: WO 0123533-A 52 05-APR-2001;

Pharmacia & Upjohn Company (US)

FEATURES

source

1. .1305

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="Hu-Ap2 (b) delta TM"

Alignment of: us-10-726-967a-1 x AX105434 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
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179 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX573872

Sequence documentation:

LOCUS AX573872 1305 bp DNA linear PAT 07-JAN-2003

DEFINITION Sequence 52 from Patent EP1249498.

ACCESSION AX573872

VERSION AX573872.1 GI:27551508

KEYWORDS

SOURCE synthetic construct

ORGANISM synthetic construct

REFERENCE 1 other sequences, artificial sequences.

AUTHORS Gurney, M. and Bienkowski, M.J.

TITLE Alzheimer's disease secretase, app substrates therefor, and uses

JOURNAL Patent: EP 1249498-A 52 16-OCT-2002;

PHARMACIA & UPJOHN COMPANY (US)
FEATURES
source

1. .1305

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="Hu-Ap2 (b) delta TM"

Alignment of: us-10-726-967a-1 x AX573872 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
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179 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

Sequence name: rgep2ndb:AB050438

Sequence documentation:

LOCUS AB050438 1333 bp mRNA linear PRI 17-JUL-2001

DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-432,

complete cds.

ACCESSION AB050438

VERSION AB050438.1 GI:13568410

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.

AUTHORS Tanahashi, H. and Tabira, T.

TITLE Three novel alternatively spliced isoforms of the human beta-site

amyloid precursor protein cleaving enzyme (BACE) and their effect

on amyloid beta-peptide production

Neurosci. Lett. 307 (1), 9-12 (2001)

JOURNAL MEDLINE

PUBMED 21408467

REFERENCE 2 (bases 1 to 1333)

AUTHORS Tanahashi, H.

TITLE Direct Submission

Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of

Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1,

Ogawabashi, Kodaira, Tokyo 187-8551, Japan

(E-mail: tanahashi@ncnp.go.jp, Tel: 81423412711 (ex. 5163),

Fax: 81423461747)

FEATURES

source

1. .1333

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/tissue_type="brain"

1. .1333

/gene="BACE"

4. .1302

/gene="BACE"

/note="alternative splicing isoform"

/product="beta-site APP cleaving enzyme I-432"

/protein_id="BAB40933.1"

/db_xref="GI:13568411"

/translation="MAQALPALLMKGAVLPAHQHGRIRLPKSGGAGPGLRLP
RTIDPPEPRGRGSFVEMVDNLGKSGGGYVEMTVGSPPQTLNLTVDGSSNFAVG
AAPPLHRYVYRQSLSTYDRKGVYVYTGKMGELGTLDCAGPPLQSEVLA
SVGSMIGIDHSLYTGSLMWTPIRREMYVIVIVINEQDLMDCKEYVYDKSI
VDSGTNLRLLPKVFEAAVKSIIKAASSTKFPDGFGLGQLVCMQAGTTPMNIPIVIS

LYLMGEVNTQSFRTITLLPOQYLRPEVEDVATSODDCYKRAISGSGSTGTWGANVINGFY
VVFDRARKRIGFAVSACHVDEFRTAAYGPFVTLDMEDCGYNITQTBESTLMTAYV
MAAICAFMLPLCLMVCWRCRCRLRQCHDFADADISLTK"

Alignment of: us-10-726-967a-1 x AB050438 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
182 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 150

Sequence name: rgep2ndb:BD235895

Sequence documentation:

LOCUS BD235895 1341 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235895
VERSION BD235895.1 GI:33045665
KEYWORDS JP 2002526081-A/11.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1341)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase
JOURNAL Patent: JP 2002526081-A 11 20-AUG-2002;
PHARMACIA AND UPJOHN CO

COMMENT OS Homo sapiens (human)
PN JP 2002526081-A/11
PD 20-AUG-2002
PF 23-SEP-1999 JP 2000574268
PR 24-SEP-1998 US 60/101594

PI MARK E GURNEY,MICHAEL JEROME BIENKOWSKI,ROBERT LEROY PI
HEINRICHSON

PC LOTS A PARODI,RIQIANG YAN
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC
C12N1/19,
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ PC
15', G01N33/50/(C12N1/21,C12R1/19),C12N15/00,C12N5/00 CC

PC Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1..1341
FT /organism="Homo sapiens (human)".

FEATURES
source 1..1341
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235895 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 126

Sequence name: rgep2ndb:AR224101

Sequence documentation:

LOCUS AR224101 1341 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 21 from patent US 6440698.
ACCESSION AR224101
VERSION AR224101.1 GI:23332761
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6440698-A 21 27-AUG-2002;
FEATURES Location/Qualifiers
source 1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224101 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 126

Sequence name: rgep2ndb:AR269232

Sequence documentation:

LOCUS AR269232 1341 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 21 from patent US 6500667.
ACCESSION AR269232
VERSION AR269232.1 GI:29700200
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides
JOURNAL Patent: US 6500667-A 21 31-DEC-2002;
FEATURES Location/Qualifiers
source 1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269232 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgleupProleuArgserglyleuglyglaAa
:::|||||:::|
158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37
126

Sequence name: rgep2ndb:AR478787

Sequence documentation:

LOCUS AR478787 1341 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 21 from patent US 6699671.
ACCESSION AR478787
VERSION AR478787.1 GI:47237507
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1341)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6699671-A 21 02-MAR-2004;
FEATURES
source Location/Qualifiers
1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478787 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgserglyleuglyglaAa
:::|||||:::|
158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37
126

Sequence name: rgep2ndb:AR487353

Sequence documentation:

LOCUS AR487353 1341 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 21 from patent US 6706485.
ACCESSION AR487353
VERSION AR487353.1 GI:47252451
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1341)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 21 16-MAR-2004;
FEATURES
source Location/Qualifiers
1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487353 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgleupProleuArgserglyleuglyglaAa
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158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37
126

Sequence name: rgep2ndb:AR531993

Sequence documentation:
LOCUS AR531993 1341 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 21 from patent US 6727074.
ACCESSION AR531993
VERSION AR531993.1 GI:53920527
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1341)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6727074-A 21 27-APR-2004;
FEATURES
source Location/Qualifiers
1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531993 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgserglyleuglyglaAa
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158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37
126

Sequence name: rgep2ndb:AR540894

Sequence documentation:
LOCUS AR540894 1341 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 21 from patent US 6737510.
ACCESSION AR540894
VERSION AR540894.1 GI:53932407
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1341)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6737510-A 21 18-MAY-2004;
FEATURES
source Location/Qualifiers
1..1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540894 ..

Alignment segment 1/1: (-)

Quality: 32.00 Score: 281
Matching length: 11
Matching Percent Similarity: 81.82 Total length: 11
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
126

Sequence name: rgep2ndb:AR560104

Sequence documentation:
LOCUS AR560104 1341 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 21 from patent US 6753163.
ACCESSION AR560104
VERSION AR560104.1 GI:53970471
KEYWORDS

SOURCE
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1341)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor

JOURNAL Patent: US 6753163-A 21 22-JUN-2004;
FEATURES
source 1.1341
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560104 ..

Alignment segment 1/1: (-)

Quality: 32.00 Score: 281
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Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

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:::|||||
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
126

Sequence name: rgep2ndb:AX105403

Sequence documentation:
LOCUS AX105403 1341 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 21 from Patent WO0123533.
ACCESSION AX105403
VERSION AX105403.1 GI:13921520
KEYWORDS

SOURCE
ORGANISM Homo sapiens (human)
Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor

JOURNAL Patent: WO 0123533-A 21 05-APR-2001;
Pharmacia & Upjohn Company (US)
FEATURES
source 1.1341
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105403 ..

Alignment segment 1/1: (-)

Quality: 32.00 Score: 281
Matching length: 11
Matching Percent Similarity: 81.82 Total length: 11
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
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158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
126

Sequence name: rgep2ndb:AX573841

Sequence documentation:
LOCUS AX573841 1341 bp DNA linear PAT 07-JUN-2003
DEFINITION Sequence 21 from Patent EP1249498.
ACCESSION AX573841
VERSION AX573841.1 GI:27551486
KEYWORDS

SOURCE
ORGANISM Homo sapiens (human)
Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1
AUTHORS Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor

JOURNAL Patent: EP 1249498-A 21 16-OCT-2002;
Pharmacia & Upjohn Company (US)
FEATURES
source 1.1341
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573841 ..

Alignment segment 1/1: (-)

Quality: 32.00 Score: 281
Matching length: 11
Matching Percent Similarity: 81.82 Total length: 11
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
126

Sequence name: rgep2ndb:BD235899

Sequence documentation:
LOCUS BD235899 1362 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235899
VERSION BD235899.1 GI:33045669
KEYWORDS JP 2002526081-A/15.

SOURCE
ORGANISM Homo sapiens (human)
Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 (bases 1 to 1362)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase

JOURNAL

Patent: JP 2002526081-A 15 20-AUG-2002;
 PHARMACIA AND UPJOHN CO

COMMENT

OS Homo sapiens (human)
 PN JP 2002526081-A/15
 PD 20-AUG-2002
 PP 23-SEP-1999 JP 2000574268
 PR 24-SEP-1998 US 60/101594
 PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
 HEINRIKSON,
 PI LUIS A PARODI, RIOIANG YAN
 PC C12N15/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC
 C12N1/19,
 PC C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/ PC
 15,
 PC G01N33/50// (C12N1/21, C12R1:19), C12N15/00, C12N5/00 CC
 Alzheimer's disease secretase
 ALZ Key Location/Qualifiers
 FT source 1..1362
 FT Location/Qualifiers
 1..1362 /organism="Homo sapiens (human)"
 /mol_type="genomic DNA"
 /db_xref="taxon:9606"

FEATURES

source Location/Qualifiers
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 /mol_type="genomic DNA"
 /db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235899 ..

Alignment segment 1/1: (-)

Matching Length:	32.00	Total Length:	281
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Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 147

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Sequence name: rgep2ndb:AR224105

Sequence documentation:

LOCUS AR224105 1362 bp DNA linear PAT 26-SEP-2002
 DEFINITION Sequence 29 from patent US 6440698.
 ACCESSION AR224105
 VERSION AR224105.1 GI:23332765

KEYWORDS

Unknown.

SOURCE

Unknown.

Unclassified.

1 (bases 1 to 1362)

REFERENCE

1 Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and

Yan, R. Alzheimer's disease secretase, APP substrates therefor, and uses

therefor

Patent: US 6440698-A 29 27-AUG-2002;

JOURNAL

Patent: US 6440698-A 29 27-AUG-2002;

FEATURES

source Location/Qualifiers
 1..1362 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224105 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 147

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Sequence name: rgep2ndb:AR269236

Sequence documentation:

LOCUS AR269236 1362 bp DNA linear PAT 10-APR-2003
 DEFINITION Sequence 29 from patent US 6500667.
 ACCESSION AR269236
 VERSION AR269236.1 GI:29700204

KEYWORDS

Unknown.

Unknown.

Unclassified.

1 (bases 1 to 1362)

REFERENCE

1 Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and

Yan, R.

Aspartyl protease 2 (Asp2) antisense oligonucleotides

Patent: US 6500667-A 29 31-DEC-2002;

JOURNAL

Patent: US 6500667-A 29 31-DEC-2002;

FEATURES

source Location/Qualifiers
 1..1362 /organism="unknown"
 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269236 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 147

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Sequence name: rgep2ndb:AR478791

Sequence documentation:

LOCUS AR478791 1362 bp DNA linear PAT 14-MAY-2004
 DEFINITION Sequence 29 from patent US 6699671.
 ACCESSION AR478791
 VERSION AR478791.1 GI:47237511

KEYWORDS

Unknown.

Unknown.

Unclassified.

1 (bases 1 to 1362)

REFERENCE

1 Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and

Yan, R.

Alzheimer's disease secretase, APP substrates therefor, and uses

therefor

Patent: US 6699671-A 29 02-MAR-2004;

JOURNAL

Patent: US 6699671-A 29 02-MAR-2004;

FEATURES

source Location/Qualifiers
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 /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478791 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla 37
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCGCTCT 147

Sequence name: rgep2ndb:AX105411

Sequence documentation:

LOCUS AX105411 1362 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 29 from Patent WO0123533.
ACCESSION AX105411
VERSION AX105411.1 GI:13921524
KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM

REFERENCE 1 Gurney, M. and Bienkowski, M.J.
AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses
TITLE

JOURNAL Patent: WO 0123533-A 29 05-APR-2001;
Pharmacia & Upjohn Company (US)
FEATURES Location/Qualifiers

1.1362
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/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105411 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla 37
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCGCTCT 147

Sequence name: rgep2ndb:AX573849

Sequence documentation:

LOCUS AX573849 1362 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 29 from Patent EP1249498.
ACCESSION AX573849
VERSION AX573849.1 GI:27551490
KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM

REFERENCE 1 Gurney, M. and Bienkowski, M.J.
AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses
TITLE

JOURNAL Patent: EP 1249498-A 29 16-OCT-2002;
Pharmacia & Upjohn Company (US)
FEATURES Location/Qualifiers

source 1.1362

/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573849 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla 37
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCGCTCT 147

Sequence name: rgep2ndb:CQ772936

Sequence documentation:

LOCUS CQ772936 1368 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 1 from Patent WO2004011641.
ACCESSION CQ772936
VERSION CQ772936.1 GI:45126404
KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM

REFERENCE 1 Vuillard, L.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and
AUTHORS Shah, A.

TITLE Crystal structure of beta-site app-cleaving enzyme (bace)
mutatnsd uses thereof

JOURNAL Patent: WO 2004011641-A 1 05-FEB-2004;
Aster Technology Limited (GB)

FEATURES

1.1368
Location/Qualifiers
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x CQ772936 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla 37
185 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCGCTCT 153

Sequence name: rgep2ndb:AF338817

Sequence documentation:

LOCUS AF338817 1374 bp mRNA linear PRI 21-MAY-2002
DEFINITION Homo sapiens beta-site APP cleaving enzyme type C mRNA, complete
cde

ACCESSION AF338817
VERSION AF338817.1 GI:13699247
KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM

REFERENCE Mammalia; Eutheria; Primates; Carnivora; Hominoidea; Homo.
AUTHORS Eberhart, R., Michel, B., De Pietri Tonelli, D., Zaccarelli, D.,
Simons, K. and Keller, P.
TITLE Splice variants of the beta-site APP-cleaving enzyme BACE1 in human
brain and pancreas
JOURNAL Biochem. Biophys. Res. Commun. 293 (1), 30-37 (2002)
MEDLINE 22049977
PUBMED 12054559
REFERENCE 2 (bases 1 to 1374)
AUTHORS Zaccarelli, D., De Pietri Tonelli, D. and Schumacher, R.
TITLE Direct Submission
JOURNAL Submitted (19-JAN-2001) Dibit, San Raffaele Scientific Institute,
via Olgettina 58, Milano, MI 20132, Italy
FEATURES
source
1..1374
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/feature_type="exon:exon:pancreas"
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/note="BACE-1C: potential splice variant of beta-site APP
cleaving enzyme (BACE)"
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/db_xref="GI:13699248"
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RTDEPEREGRGRSFEVEMVNDLRGSGGYVEMVGSPPQNLILVTSNFAVG
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GFWLGEQLVCWQAGTTPMNI PVIISLYLGEVTVNOSFRITLLPQVLRVEDVAISQD
DCYKPAISQSTGTWGAIVMEGFVYPPRARIRIGPVAACVHDEFTAAVEGFPV
TIDMEDCGYNIPTDSTMTLTAYVAALCALFMLPLCLMVCQMRCLARCRQHDHDA
DISLSLK"

Alignment of: ua-10-726-967a-1 x AF338817 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:BD235896

Sequence documentation:
LOCUS BD235896 1380 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235896
VERSION BD235896.1 GI:33045666
KEYWORDS JP 2002526081-A/12.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
1 (bases 1 to 1380)
Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and
Yan, R.
TITLE Alzheimer's disease secretase
JOURNAL Patent: JP 2002526081-A 12 20-AUG-2002;
PHARMACIA AND UPJOHN CO
COMMENT OS Homo sapiens (human)

PN JP 2002526081-A/12
PD 20-AUG-2002
PR 23-SEP-1999 JP 200574268
PR 24-SEP-1998 US 60/101594
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
HEINRICHSON,
PI LUIS A PARODI, RIGIANG YAN
PC C12N15/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC
C12N1/19,
PC C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/15,
PC G01N33/50//C12N1/21, C12R1:19, C12N15/00, C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
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FT Location/Qualifiers
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/mol_type="genomic DNA"
/db_xref="taxon:9606"

Alignment of: ua-10-726-967a-1 x BD235896 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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197 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 165

Sequence name: rgep2ndb:BD235900

Sequence documentation:
LOCUS BD235900 1380 bp DNA linear PAT 17-JUL-2003
DEFINITION Alzheimer's disease secretase.
ACCESSION BD235900
VERSION BD235900.1 GI:33045670
KEYWORDS JP 2002526081-A/16.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
1 (bases 1 to 1380)
Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and
Yan, R.
TITLE Alzheimer's disease secretase
JOURNAL Patent: JP 2002526081-A 16 20-AUG-2002;
PHARMACIA AND UPJOHN CO
COMMENT OS Homo sapiens (human)
PN JP 2002526081-A/16
PD 20-AUG-2002 JP 200574268
PR 23-SEP-1999 JP 200574268
PR 24-SEP-1998 US 60/101594
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
HEINRICHSON,
PI LUIS A PARODI, RIGIANG YAN
PC C12N15/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC
C12N1/19,
PC C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/15,
PC G01N33/50//C12N1/21, C12R1:19, C12N15/00, C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers

FT source 1. 1380
/organism="Homo sapiens (human)"
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1. 1380
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235900 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Total length: 281
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR224102
Sequence documentation:
LOCUS AR224102 1380 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 23 from patent US 6440698.
ACCESSION AR224102
VERSION AR224102.1 GI:23332762
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6440698-A 23 27-AUG-2002;
FEATURES
source
1. 1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224102 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Total length: 281
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
197 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 165

Sequence name: rgep2ndb:AR224106
Sequence documentation:
LOCUS AR224106 1380 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 31 from patent US 6440698.
ACCESSION AR224106
VERSION AR224106.1 GI:23332766
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6440698-A 31 27-AUG-2002;
FEATURES
source
1. 1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224106 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Total length: 281
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR269233
Sequence documentation:
LOCUS AR269233 1380 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 23 from patent US 6500667.
ACCESSION AR269233
VERSION AR269233.1 GI:29700201
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Aspartyl protease 2 (Asp2) antilease oligonucleotides
JOURNAL Patent: US 6500667-A 23 31-DEC-2002;
FEATURES
source
1. 1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269233 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Total length: 281
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
197 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 165

Sequence name: rgep2ndb:AR269237
Sequence documentation:
LOCUS AR269237 1380 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 31 from patent US 6500667.
ACCESSION AR269237
VERSION AR269237.1 GI:29700205
KEYWORDS
SOURCE Unknown.

ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Aspartyl protease 2 (Asp2) antiense oligonucleotides
JOURNAL Patent: US 6500667-A 31 31-DEC-2002;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269237 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyyAla
:::|||||
179 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR478788

Sequence documentation:

LOCUS AR478788 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 23 from patent US 6699671.
ACCESSION AR478788
VERSION AR478788.1 GI:47237508
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6699671-A 23 02-MAR-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478788 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyyAla
:::|||||
197 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR478792

Sequence documentation:

LOCUS AR478792 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 31 from patent US 6699671.
ACCESSION AR478792
VERSION AR478792.1 GI:47237512

KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6699671-A 31 02-MAR-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478792 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyyAla
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179 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR487354

Sequence documentation:

LOCUS AR487354 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 23 from patent US 6706485.
ACCESSION AR487354
VERSION AR487354.1 GI:47252452
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 23 16-MAR-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487354 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyyAla
:::|||||
197 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR487358

Sequence documentation:

LOCUS AR487358 1380 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 31 from patent US 6706485.

ACCESSION AR487358
VERSION AR487358.1 GI:47252456
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.
TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 31 16-MAR-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487358 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total length: 281
Total Percent Identity: 54.55
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::|
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR531994
Sequence documentation:
LOCUS AR531994 1380 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 23 from patent US 6727074.
ACCESSION AR531994
VERSION AR531994.1 GI:53920528
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof
JOURNAL Patent: US 6727074-A 23 27-APR-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531994 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total length: 281
Total Percent Identity: 54.55
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::|
197 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 165

Sequence name: rgep2ndb:AR531998
Sequence documentation:

LOCUS AR531998 1380 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 31 from patent US 6727074.
ACCESSION AR531998
VERSION AR531998.1 GI:53920532
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof
JOURNAL Patent: US 6727074-A 31 27-APR-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531998 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total length: 281
Total Percent Identity: 54.55
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::|
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR540895
Sequence documentation:
LOCUS AR540895 1380 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 23 from patent US 6737510.
ACCESSION AR540895
VERSION AR540895.1 GI:53932408
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 1380)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof
JOURNAL Patent: US 6737510-A 23 18-MAY-2004;
FEATURES Location/Qualifiers
source 1..1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540895 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total length: 281
Total Percent Identity: 54.55
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::|
197 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 165

Sequence name: rgep2ndb:AR540899

Sequence documentation: 1380 bp DNA linear PAT 08-OCT-2004
LOCUS AR540899 Sequence 31 from patent US 6737510.
DEFINITION AR540899
ACCESSION AR540899
VERSION AR540899.1 GI:53932412
KEYWORDS
SOURCE
ORGANISM Unknown.
REFERENCE
AUTHORS 1 (bases 1 to 1380)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6737510-A 31 18-MAY-2004;
FEATURES
source 1.1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540899 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGCTCT 147
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Sequence name: rgep2ndb:AR560105

Sequence documentation: 1380 bp DNA linear PAT 08-OCT-2004
LOCUS AR560105
DEFINITION Sequence 23 from patent US 6753163.
ACCESSION AR560105
VERSION AR560105.1 GI:53970472
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE
AUTHORS 1 (bases 1 to 1380)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6753163-A 23 22-JUN-2004;
FEATURES
source 1.1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560105 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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197 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGCTCT 165
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Sequence name: rgep2ndb:AR560109

Sequence documentation: 1380 bp DNA linear PAT 08-OCT-2004
LOCUS AR560109 Sequence 31 from patent US 6753163.
DEFINITION AR560109
ACCESSION AR560109
VERSION AR560109.1 GI:53970476
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE
AUTHORS 1 (bases 1 to 1380)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6753163-A 31 22-JUN-2004;
FEATURES
source 1.1380
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560109 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGCTCT 147
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Sequence name: rgep2ndb:AX105405

Sequence documentation: 1380 bp DNA linear PAT 30-APR-2001
LOCUS AX105405
DEFINITION Sequence 23 from Patent WO0123533.
ACCESSION AX105405
VERSION AX105405.1 GI:13921521
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
REFERENCE
AUTHORS 1
Mammalia; Eutheria; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Primates; Catarrhini; Homindae; Homo.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
thereof
JOURNAL Patent: WO 0123533-A 23 05-APR-2001;
FEATURES
source 1.1380
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105405 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment: Gaps: 0

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
197 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX105413

Sequence documentation:

LOCUS AX105413 1380 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 31 from Patent WO0123533.
ACCESSION AX105413
VERSION AX105413.1 GI:13921525

KEYWORDS
SOURCE Homo sapiens (human)

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE
AUTHORS Gurney, M. and Bienkowski, M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor

JOURNAL Patent: WO 0123533-A 31 05-APR-2001;
Pharmacia & Upjohn Company (US)

FEATURES
source 1. .1380
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105413 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	281
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX573843

Sequence documentation:

LOCUS AX573843 1380 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 23 from Patent EP1249498.
ACCESSION AX573843
VERSION AX573843.1 GI:27551487

KEYWORDS
SOURCE Homo sapiens (human)

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE
AUTHORS Gurney, M. and Bienkowski, M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor

JOURNAL Patent: EP 1249498-A 23 16-OCT-2002;
Pharmacia & Upjohn Company (US)

FEATURES
source 1. .1380
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573843 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	281
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
197 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX573851

Sequence documentation:

LOCUS AX573851 1380 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 31 from Patent EP1249498.
ACCESSION AX573851
VERSION AX573851.1 GI:27551491

KEYWORDS
SOURCE Homo sapiens (human)

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE
AUTHORS Gurney, M. and Bienkowski, M.J.
TITLE Alzheimer's disease secretase, app substrates therefor, and uses
therefor

JOURNAL Patent: EP 1249498-A 31 16-OCT-2002;
Pharmacia & Upjohn Company (US)

FEATURES
source 1. .1380
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573851 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	281
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:CQ772938

Sequence documentation:

LOCUS CQ772938 1386 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 3 from Patent WO2004011641.
ACCESSION CQ772938
VERSION CQ772938.1 GI:45126405

KEYWORDS
SOURCE synthetic construct

ORGANISM other sequences; artificial sequences.

REFERENCE
AUTHORS Villard, L.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and
Shah, A.

TITLE Crystal structure of beta-site app-cleaving enzyme (bace)
mutant and uses thereof
JOURNAL Patent: WO 2004011641-A 3 05-FEB-2004;
Aetex Technology Limited (GB)

FEATURES
source

Location/Qualifiers
1..1386
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE protein, BACE N->Q."

Alignment of: us-10-726-967a-1 x CQ772938 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgserGlyLeuGlyGlyAla 37
:::|||||:::|
185 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 153

Sequence name: rgep2ndb:AB050437

Sequence documentation:

LOCUS AB050437 1408 bp mRNA linear PRI 17-JUL-2001
DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-457,
complete cds.

ACCESSION AB050437
VERSION AB050437.1 GI:13568408

KEYWORDS
SOURCE Homo sapiens (human)

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.

REFERENCE
AUTHORS Tanahashi, H. and Tabira, T.
TITLE Three novel alternatively spliced isoforms of the human beta-site
amyloid precursor protein cleaving enzyme (BACE) and their effect
on amyloid beta-peptide production

JOURNAL Neurosci. Lett. 307 (1), 9-12 (2001)
MEDLINE 21408467
PUBMED 11516562
2 (bases 1 to 1408)
Tanahashi, H.
Direct Submission
Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of
Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1,
Ogawabashi, Kodaira, Tokyo 187-8551, Japan
(E-mail: tanahashi@ncmp.go.jp, Tel: 81432412711 (ex. 5163),
Fax: 81432461747)

FEATURES
source
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/mol_type="mRNA"
/db_xref="taxon:9606"
/issue_type="brain"
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/gene="BACE"
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/gene="BACE"
/note="alternative splicing isoform"
/product="beta-site APP cleaving enzyme I-457"
/protein_id="BAB40932.1"
/db_xref="GI:13568409"

FEATURES
source
1..1408
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/issue_type="brain"
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/gene="BACE"
4..1377
/gene="BACE"
/note="alternative splicing isoform"
/product="beta-site APP cleaving enzyme I-457"
/protein_id="BAB40932.1"
/db_xref="GI:13568409"

FEATURES
source
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/issue_type="brain"
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/gene="BACE"
4..1377
/gene="BACE"
/note="alternative splicing isoform"
/product="beta-site APP cleaving enzyme I-457"
/protein_id="BAB40932.1"
/db_xref="GI:13568409"

GFMLGQLVCMQAGCTTPMNIIPVISILMGEVNTOSFRITLIPQYLRPEVDVATSD
DCYKFAISQSTGTWAGVMEGFYVPRAKRIGFVSAACHDEFTTAVEGFPV
TLDMDCGNIPQTDSTLMTIAYMAICALFMLPLCLMVCQMRCLRCLROOHDDFA
DDISLKL"

Alignment of: us-10-726-967a-1 x AB050437 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgserGlyLeuGlyGlyAla 37
:::|||||:::|
182 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 150

Sequence name: rgep2ndb:AF338816

Sequence documentation:

LOCUS AF338816 1431 bp mRNA linear PRI 21-MAY-2002
DEFINITION Homo sapiens beta-site APP cleaving enzyme type B mRNA, complete
cds.

ACCESSION AF338816
VERSION AF338816.1 GI:13699245

KEYWORDS
SOURCE Homo sapiens (human)

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.

REFERENCE
AUTHORS Ehenalt, R., Michel, B., De Pietri Tonelli, D., Zaccchetti, D.,
Simons, K. and Keller, P.
TITLE Splice variants of the beta-site APP-cleaving enzyme BACE1 in human
brain and pancreas

JOURNAL Biochem. Biophys. Res. Commun. 293 (1), 30-37 (2002)
MEDLINE 22049977
PUBMED 12054559
2 (bases 1 to 1431)
Michel, B., De Pietri Tonelli, D., Zaccchetti, D. and Keller, P.
Direct Submission
Submitted (19-JAN-2001) Max Planck Institute of Molecular Cell
Biology and Genetics, Pflotenhauserstr. 108, Dresden D-01307, Germany

FEATURES
source
1..1431
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/issue_type="brain; exocrine pancreas"
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/note="BACE-1B; potential splice variant of beta-site APP
cleaving enzyme (BACE)"
/product="beta-site APP cleaving enzyme type B"
/protein_id="AAK38374.1"
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/translation="MAQALPMLLMGAGVLPNAGTQHGIRLPRLSGLGAPGLRLP
RETDERPERGRGSEFVEMVDNLKSGGGYVEMVGSPPQTLNLTVDGSSNFAVG
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FEATURES
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Alignment of: us-10-726-967a-1 x AF338816 ..

Alignment segment 1/1: (-)

Alignment segment 1/1: (-)
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Matching length: 11
Matching Percent Similarity: 81.82
Total Percent Similarity: 81.82
Total Length: 281
Total Percent Identity: 11
Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX700448

Sequence documentation:

LOCUS AX700448 1506 bp DNA linear PAT 03-APR-2003
DEFINITION Sequence 3 from Patent WO03012089.
ACCESSION AX700448
VERSION AX700448.1 GI:29536239
KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM

REFERENCE 1
AUTHORS Yon,J., Cleasby,A., Bruinzeel,W.D., Maure,S.L., Tickle,I. and Shariff,A.
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use thereof
PATENT: WO 03012089-A 3 13-FEB-2003;
FEATURES
LOCATION/Qualifiers
1. .1506
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700448 ..
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Matching Percent Similarity: 81.82
Total Percent Similarity: 81.82
Total Length: 281
Total Percent Identity: 11
Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX823518

Sequence documentation:

LOCUS AX823518 1506 bp DNA linear PAT 11-DEC-2003
DEFINITION Sequence 8 from Patent EPI340424.
ACCESSION AX823518
VERSION AX823518.1 GI:39749972
KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM

REFERENCE 1
AUTHORS Jacobsen,H., Mosbach-Olsen,L. and Nelboeck-Hochstetler,P.
TITLE Double transgenic animal model for alzheimer's disease
JOURNAL Patent: EP 1340424-A 8 03-SEP-2003;
F. HOFMANN-LA ROCHE AG (CH)

FEATURES
source Location/Qualifiers
1. .1506
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX823518 ..

Alignment segment 1/1: (-)

Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total Percent Similarity: 81.82
Total Length: 281
Total Percent Identity: 11
Total Percent Identity: 54.55
Gaps: 0

Alignment:

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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AF204943

Sequence documentation:

LOCUS AF204943 1506 bp mRNA linear PRI 19-JAN-2000
DEFINITION Homo sapiens transmembrane aspartic proteinase Asp 2 (BACE1) mRNA, complete cds.
ACCESSION AF204943
VERSION AF204943.1 GI:6715309
KEYWORDS

SOURCE Homo sapiens (human)
ORGANISM

REFERENCE 1
AUTHORS Husain,I., Powell,D., Howlett,D.R., Tew,D.G., Week,T.D., Chapman,C., Gloger,I.S., Murphy,K.E., Southan,C.D., Ryan,D.M., Smith,T.S., Simmons,D.L., Walsh,F.S., Dingwall,C. and Christie,G.
TITLE Identification of a novel aspartic protease (Asp 2) as beta-secretase
Mol. Cell. Neurosci. 14 (6), 419-427 (1999)

JOURNAL MEDLINE 20030166
PUBMED 10656250
REFERENCE 2 (bases 1 to 1506)
AUTHORS Powell,D.J., Chapman,C.G. and Murphy,K.
TITLE Direct Substitution
JOURNAL Submitted (15-NOV-1999) SmithKline Beecham Pharmaceuticals, 709 Swedeland Rd., King of Prussia, PA 19046, USA
LOCATION/Qualifiers
1. .1506
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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gene
CDS

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Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCTCCGGCCGGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR269225

Sequence documentation:

LOCUS AR269225 1977 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 5 from patent US 6500667.
ACCESSION AR269225
VERSION AR269225.1 GI:29700193
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.
TITLE Aspartyl protease 2 (Asp2) antitense oligonucleotides

JOURNAL Patent: US 6500667-A 5 31-DEC-2002;

FEATURES Location/Qualifiers

source 1..1977

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Alignment of: us-10-726-967a-1 x AR269225 ..

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179 AAGCTGCCCTCCGGCCGGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR478779

Sequence documentation:

LOCUS AR478779 1977 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 5 from patent US 6699671.
ACCESSION AR478779
VERSION AR478779.1 GI:47237499
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6699671-A 5 02-MAR-2004;

FEATURES Location/Qualifiers
source 1..1977
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/mol_type="genomic DNA"

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Gaps:	0		

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179 AAGCTGCCCTCCGGCCGGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR487346

Sequence documentation:

LOCUS AR487346 1977 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 5 from patent US 6706485.
ACCESSION AR487346
VERSION AR487346.1 GI:47252444
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.
TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 5 16-MAR-2004;

FEATURES Location/Qualifiers

source 1..1977

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/mol_type="genomic DNA"

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Alignment segment 1/1: (-)

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Gaps:	0		

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179 AAGCTGCCCTCCGGCCGGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR531985

Sequence documentation:

LOCUS AR531985 1977 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 5 from patent US 6727074.
ACCESSION AR531985
VERSION AR531985.1 GI:53920519
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6699671-A 5 02-MAR-2004;

therefor
JOURNAL Patent: US 6440698-A 3 27-AUG-2002;
FEATURES Location/Qualifiers
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Alignment segment 1/1: (-)

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Gaps:	0		

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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rgep2ndb:AR269224

Sequence documentation:

LOCUS AR269224 2070 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 3 from patent US 650667.
ACCESSION AR269224
VERSION AR269224.1 GI:29700192
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.

TITLE Aspartyl protease 2 (as2) antipense oligonucleotides
JOURNAL Patent: US 650667-A 3 31-DEC-2002;
FEATURES Location/Qualifiers
source 1. .2070
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/mol_type="genomic DNA"

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Alignment segment 1/1: (-)

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Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rgep2ndb:AR478778

Sequence documentation:

LOCUS AR478778 2070 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 3 from patent US 6699671.
ACCESSION AR478778
VERSION AR478778.1 GI:47237498
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Van,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6699671-A 3 02-MAR-2004;
FEATURES Location/Qualifiers
source 1. .2070
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Alignment of: us-10-726-967a-1 x AR478778 ..

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Gaps:	0		

Alignment:

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37
147

Sequence name: rgep2ndb:AR487345

Sequence documentation:

LOCUS AR487345 2070 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 3 from patent US 6706485.
ACCESSION AR487345
VERSION AR487345.1 GI:47252443
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.

TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 3 16-MAR-2004;
FEATURES Location/Qualifiers
source 1. .2070
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Alignment of: us-10-726-967a-1 x AR487345 ..

Alignment segment 1/1: (-)

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Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
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Gaps:	0		

Alignment:

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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rgep2ndb:AR531984

Sequence documentation:

LOCUS AR531984 2070 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 3 from patent US 6727074.
ACCESSION AR531984
VERSION AR531984.1 GI:53920518
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

REFERENCE 1 (bases 1 to 2070)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Alzheimer's disease secretase, APP substrates thereof, and uses
JOURNAL Patent: US 6727074-A 3 27-APR-2004;
FEATURES Location/Qualifiers
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/mol_type="genomic DNA"

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Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence documentation:
LOCUS AR540886 2070 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 3 from patent US 6737510.
ACCESSION AR540886
VERSION AR540886.1 GI:53932399
KEYWORDS
SOURCE .
ORGANISM Unknown.
REFERENCE Unclassified.
AUTHORS 1 (bases 1 to 2070)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Van,R.
TITLE Alzheimer's disease secretase, APP substrates thereof, and uses
JOURNAL Patent: US 6737510-A 3 18-MAY-2004;
FEATURES Location/Qualifiers
source 1..2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540886 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Total length: 282
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence documentation:
LOCUS AR560095 2070 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 3 from patent US 6753163.
ACCESSION AR560095
VERSION AR560095.1 GI:53970462
KEYWORDS

SOURCE Unknown.
ORGANISM Unknown.
REFERENCE Unclassified.
AUTHORS 1 (bases 1 to 2070)
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
TITLE Alzheimer's disease secretase, APP substrates thereof, and uses
JOURNAL Patent: US 6753163-A 3 22-JUN-2004;
FEATURES Location/Qualifiers
source 1..2070
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560095 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Total length: 282
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence documentation:
LOCUS AX105385 2070 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 3 from Patent WO0123533.
ACCESSION AX105385
VERSION AX105385.1 GI:13921511
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
REFERENCE Buksayova; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
AUTHORS 1
Gurney,M. and Bienkowski,M.J.
TITLE Alzheimer's disease secretase, app substrates thereof, and uses
JOURNAL Patent: WO 0123533-A 3 05-APR-2001;
FEATURES Location/Qualifiers
source 1..2070
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105385 ..
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Quality: 32.00
Matching length: 11
Total length: 282
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX378015
Sequence documentation:

LOCUS	AX378015	2070 bp	DNA	linear	PAT 18-MAR-2002
DEFINITION	Sequence 1 from Patent WO0206306.				
ACCESSION	AX378015				
VERSION	AX378015.1	GI:19574050			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.				
AUTHORS	1 Yan, R., Tomasselli, A.G., Gurney, M.E., Emmons, T.L., Bienkowski, M.J. and Heinrichson, R.L.				
TITLE	Substrates and assays for 'g(b)-secretase activity				
JOURNAL	Patent: WO 0206306-A 1 24-JAN-2002;				
FEATURES	PHARMACIA & UPJOHN COMPANY (US)				
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179 AAGCTGCCCCCTCGGCGGAGCTCTCGGCGCTC		147			
Sequence name: rgep2ndb:AX573823					
Sequence documentation:					
LOCUS	AX573823	2070 bp	DNA	linear	PAT 07-JAN-2003
DEFINITION	Sequence 3 from Patent EP1249498.				
ACCESSION	AX573823				
VERSION	AX573823.1	GI:27551477			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.				
AUTHORS	1 Gurney, M. and Bienkowski, M.J.				
TITLE	Alzheimer's disease secretase, app substrates therefor, and uses therefor				
JOURNAL	Patent: EP 1249498-A 3 16-OCT-2002;				
FEATURES	PHARMACIA & UPJOHN COMPANY (US)				
source	Location/Qualifiers				
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Sequence documentation:				
LOCUS	AX700447	2070 bp	DNA	linear PAT 03-APR-2003
DEFINITION	Sequence 2 from Patent WO03102089.			
ACCESSION	AX700447			
VERSION	AX700447.1	GI:29536238		
KEYWORDS				
SOURCE	Homo sapiens (human)			
ORGANISM	Homo sapiens			
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo. 1 Yon,J., cleasby,A., Brinzeel,W.D., Masure,S.L., Tickle,I. and Shoff,A. Crystal structure of beta-site app cleaving enzyme (bace) and use thereof Patent: WO 03102089-A 2 13-FEB-2003; Astex Technology Limited (GB) ; JANSEN PHARMACEUTICA N.V. (BE) Location/Qualifiers 1..2070 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"			
TITLE	JOURNAL			
FEATURES	source			
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Sequence documentation:				
LOCUS	AF200343	2070 bp	mRNA	linear PRI 12-DEC-1999
DEFINITION	Homo sapiens chromosome 11 aspartyl protease 2 mRNA, complete cds.			
ACCESSION	AF200343			
VERSION	AF200343.1	GI:5651813		
KEYWORDS				
SOURCE	Homo sapiens (human)			
ORGANISM	Homo sapiens			
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo. 1 (bases 1 to 2070) Yan,R., Bienkowski,M.J., Shuck,M.E., Miao,H., Torz,M.C., Pauley,A.M., Brashear,J.R., Stratman,N.C., Mathews,W.R., Buhl,A.E., Carter,D.B., Tomasselli,A.G., Parodi,L.A., Heinrichson,K.L. and Gunther,M.E. Membrane-anchored aspartyl protease with Alzheimer's disease beta-secretase activity Nucleic-acids 402 (6761), 533-537 (1999) 2 (bases 1 to 2070) Blenkowsky,M.J., Shuck,M.E., Slightom,J.L. and Drong,R.F. Direct Submission Submitted (29-OCT-1999) Genomics Research, PharmaciatUpjohn, 301 Henrietta, Kalamazoo, MI 49007, USA Location/Qualifiers			
TITLE	JOURNAL			
JOURNAL	MEDLINE			
PUBMED	10591213			
REFERENCES	AUTHORS			
JOURNAL	FEATURES			

source

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/db_xref="GI:6561814"

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GFLNOSVLAISYSGMIIIGTSHLYTGSLSMTPTIRREYIVIIIVREINQDLKM
DCKEYVDSKISVSGTINLRPKRVPAVAKSIKAASTEKPEDFGFWLGQLVCWAG
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Alignment of: us-10-726-967a-1 x AF200343 ..

Alignment segment 1/1: (-)

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Gaps:	0		

Alignment:

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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR178469

Sequence documentation:

LOCUS AR178469 2541 bp DNA linear PAT 20-APR-2002
DEFINITION Sequence 1 from patent US 6319689.
ACCESSION AR178469
VERSION AR178469.1 GI:20219607
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.
REFERENCE 1 (bases 1 to 2541)
AUTHORS Powell,D.J., Chapman,C.G., Murphy,K. and Smith,T.S.
TITLE ASP2
JOURNAL Patent: US 6319689-A 1 20-NOV-2001;
FEATURES
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1. .2541 Location/Qualifiers
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Alignment of: us-10-726-967a-1 x AR178469 ..

Alignment segment 1/1: (-)

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Gaps:	0		

Alignment:

27 ArgleupProleuArgSerGlyLeuGlyGlyAla 37
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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:E50816

Sequence documentation:
LOCUS E50816 2541 bp DNA linear PAT 18-JUN-2001
DEFINITION Aspartate proteinase ASP2.
ACCESSION E50816
VERSION E50816.1 GI:13023199
KEYWORDS JP 2000060579-A/1.
SOURCE unidentified
ORGANISM unidentified

REFERENCE 1 (bases 1 to 2541)
AUTHORS David,J.P., Conrad,G.C., Kay,M. and Trudy,S.S.
TITLE Aspartate proteinase ASP2
JOURNAL Patent: JP 2000060579-A 1 29-FEB-2000;
SMITHKLINE BEECHAM CORP

COMMENT

OS Unidentified
PN JP 2000060579-A/1
PD 29-FEB-2000
PE 03-AUG-1999 JP 199219665
PR 28-JAN-1997 GB 9701684.4
PI DAVID J POWERU,CONRAD G CHAPPURMAN,KAY MAFL,TRUDY S SMITH PC
C12N15/09,A61K31/7088,A61K38/46,A61K39/00,A61K39/395, PC
A61K39/395,A61K48/00,
PC A61P25/28,A61P35/00,A61P43/00,C07K16/40,C12N1/15,C12N1/19, PC
C12N1/21,
PC C12N5/10,C12N9/64,C12Q1/37,G01N33/15,G01N33/50,G01N33/53, PC
G01N33/566
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CC Topology: Linear;
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Gaps:	0		

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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX002655

Sequence documentation:

LOCUS AX002655 2541 bp DNA linear PAT 10-MAR-2000
DEFINITION Sequence 1 from Patent EP0855444.
ACCESSION AX002655
VERSION AX002655.1 GI:7242133
KEYWORDS
SOURCE unidentified
ORGANISM unidentified

REFERENCE 1 (bases 1 to 2541)
AUTHORS Murphy,K. and Chapman,C.G.
TITLE Aspartic proteinase 2 (ASP2)
JOURNAL Patent: EP 0855444-A 1 29-JUL-1998;
SMITHKLINE BEECHAM PLC (GB); SMITHKLINE BEECHAM CORP (US)
FEATURES
Location/Qualifiers

KEYWORDS
SOURCE Homo sapiens (human)

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE 1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS 1 Tang,J.J., Lin,X. and Koelsch,G.
TITLE Catalytically active recombinant memapsin and methods of use there

JOURNAL Patent: WO 010663-A 1 04-JAN-2001;

REFERENCE Oklahoma Medical Research Foundation (US)

FEATURES 1. .3252
Location/Qualifiers

SOURCE /organism="Homo sapiens"

/mol_type="unassigned DNA"

/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX063201 ..

Alignment segment 1/1: (-)

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Gaps:	0		

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140 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 108
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Sequence name: rgep2ndb:AX472368

Sequence documentation:

LOCUS AX472368 3252 bp DNA linear PAT 09-AUG-2002

DEFINITION Sequence 1 from Patent WO02053594.

ACCESSION AX472368

VERSION AX472368.1 GI:22207364

KEYWORDS Homo sapiens (human)

SOURCE Homo sapiens

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE 1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS 1 Ghosh,A.K., Koelsch,G. and Tang,J.J.

TITLE Inhibitors of memapsin 2 and use thereof

JOURNAL Patent: WO 02053594-A 1 11-JUL-2002;

OKLAHOMA MED RES FOUND (US); TRUSTEES OF THE UNIVERSITY OF ILLINOIS

FEATURES 1. .3252
Location/Qualifiers

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/mol_type="unassigned DNA"

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Alignment of: us-10-726-967a-1 x AX472368 ..

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Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
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Sequence name: rgep2ndb:AX700453

Sequence documentation:

LOCUS AX700453 3252 bp DNA linear PAT 03-APR-2003

DEFINITION Sequence 8 from Patent WO03012089.

ACCESSION AX700453

VERSION AX700453.1 GI:29536242

KEYWORDS Homo sapiens (human)

SOURCE Homo sapiens

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE 1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS 1 Yon,J., Claasby,A., Bruinzeel,W.D., Masure,S.L., Tickle,I. and

Shariff,A.

TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use

JOURNAL Patent: WO 03012089-A 8 13-FEB-2003;

Novartis Technologies Limited (GB); JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES 1. .3252
Location/Qualifiers

SOURCE /organism="Homo sapiens"

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Alignment segment 1/1: (-)

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Sequence name: rgep2ndb:AF200193

Sequence documentation:

LOCUS AF200193 3252 bp mRNA linear PRI 16-FEB-2000

DEFINITION Homo sapiens memapsin 2 mRNA, partial cds.

ACCESSION AF200193

VERSION AF200193.1 GI:6470292

KEYWORDS Homo sapiens (human)

SOURCE Homo sapiens

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE 1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS 1 (bases 1 to 3252)

TITLE Lin,X., Koelsch,G., Wu,S., Downs,D., Daehli,A. and Tang,J.

JOURNAL Human aspartic protease memapsin 2 cleaves the beta-secretase site

Proc. Natl. Acad. Sci. U.S.A. 97 (4), 1456-1460 (2000)

FEATURES 1. .3252
Location/Qualifiers

SOURCE /organism="Homo sapiens"

/mol_type="mRNA"

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Gaps:	1		

Alignment:

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1170 CGCTTGCATGTGCACGATGAGTTCAGACGCGGTGGAAGGCC 1217

Sequence name: rgep2ndb:AR478790

Sequence documentation:

LOCUS AR478790 1278 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 27 from patent US 6699671.
ACCESSION AR478790
VERSION AR478790.1 GI:47237510
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6699671-A 27 02-MAR-2004;
FEATURES Location/Qualifiers
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Gaps:	1		

Alignment:

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Sequence name: rgep2ndb:AR487356

Sequence documentation:

LOCUS AR487356 1278 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 27 from patent US 6706485.
ACCESSION AR487356
VERSION AR487356.1 GI:47252454
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

JOURNAL Patent: US 6706485-A 27 16-MAR-2004;
TITLE Method of identifying agents that inhibit APP processing activity

FEATURES Location/Qualifiers
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/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487356 ..

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Sequence name: rgep2ndb:AR531996

Sequence documentation:

LOCUS AR531996 1278 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 27 from patent US 6727074.
ACCESSION AR531996
VERSION AR531996.1 GI:53920530
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6727074-A 27 27-APR-2004;
FEATURES Location/Qualifiers
source 1..1278
/organism="unknown"
/mol_type="genomic DNA"

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Gaps:	1		

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1170 CGCTTGCATGTGCACGATGAGTTCAGACGCGGTGGAAGGCC 1217

Sequence name: rgep2ndb:AR540897

Sequence documentation:

LOCUS AR540897 1278 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 27 from patent US 6737510.
ACCESSION AR540897
VERSION AR540897.1 GI:53932410
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof
JOURNAL Patent: US 6737510-A 27 18-MAY-2004;
FEATURES Location/Qualifiers
SOURCE 1. 1278
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Gaps: 1

Alignment:

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Sequence name: rgep2ndb:AR560107

Sequence documentation:

LOCUS AR560107 1278 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 27 from Patent US 6753163.
ACCESSION AR560107
VERSION AR560107.1 GI:53970474

KEYWORDS

SOURCE Unknown.

ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6753163-A 27 22-JUN-2004;
FEATURES Location/Qualifiers

SOURCE 1. 1278
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/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560107 ..

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Total Percent Similarity:	62.50	Total Percent Identity:	43.75

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Sequence name: rgep2ndb:AX105409

Sequence documentation:

LOCUS AX105409 1278 bp DNA linear PAT 30-APR-2001
DEFINITION Sequence 27 from Patent WO0123533.
ACCESSION AX105409
VERSION AX105409.1 GI:13921523

KEYWORDS

SOURCE Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE 1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Gurney,M. and Blenkowski,M.J.

TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: WO 0123533-A 27 05-APR-2001;
FEATURES Pharmacia & Upjohn Company (US)
SOURCE Location/Qualifiers

1. 1278
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105409 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	295
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CGCTTGCCATGTCAGATGAGTTCAAGCGCAGCGGTGAAGGCC 1217

Sequence name: rgep2ndb:AX573847

Sequence documentation:

LOCUS AX573847 1278 bp DNA linear PAT 07-JAN-2003
DEFINITION Sequence 27 from Patent EP1249498.
ACCESSION AX573847
VERSION AX573847.1 GI:27551489

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1

AUTHORS Gurney,M. and Blenkowski,M.J.

TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: EP 1249498-A 27 16-OCT-2002;
FEATURES PHARMACIA & UPJOHN COMPANY (US)
SOURCE Location/Qualifiers

1. 1278
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573847 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	295
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CGCTTGCCATGTCAGATGAGTTCAAGCGCAGCGGTGAAGGCC 1217

Sequence name: rgep2ndb:CQ772942

Sequence documentation:

LOCUS CQ772942 1368 bp DNA linear PAT 04-MAR-2004

DEFINITION Sequence 7 from Patent WO2004011641.

ACCESSION CQ772942

VERSION CQ772942.1 GI:45126407

KEYWORDS

SOURCE

ORGANISM

REFERENCE 1 Vuillard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

AUTHORS Shah,A.

TITLE Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL mutantand uses thereof

PATENT Patent: WO 2004011641-A 7 05-FEB-2004;

KEYWORDS Astex Technology Limited (GB)

FEATURES

LOCATION/Qualifiers

1. 1368

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="DNA sequence coding for the BACE WT R57K."

Alignment of: us-10-726-967a-1 x CQ772942 ..

Alignment segment 1/1: (-)

Quality: 28.00

Matching length: 11

Matching Percent Similarity: 81.82

Total length: 11

Matching Percent Identity: 45.45

Total Percent Similarity: 81.82

Total Percent Identity: 45.45

Gaps: 0

Score: 295

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

185 AAGCTGCCCTTCGGCGCGGCTCTCGGCTCT

153

Sequence name: rgep2ndb:CQ772950

Sequence documentation:

LOCUS CQ772950

DEFINITION Sequence 15 from Patent WO2004011641.

ACCESSION CQ772950

VERSION CQ772950.1 GI:45126411

KEYWORDS

SOURCE

ORGANISM

REFERENCE 1

AUTHORS Vuillard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

TITLE Shah,A.

JOURNAL Crystal structure of beta-site app-cleaving enzyme (bace)

PATENT Patent: WO 2004011641-A 15 05-FEB-2004;

KEYWORDS Astex Technology Limited (GB)

FEATURES

LOCATION/Qualifiers

1. 1386

/organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="taxon:32630"

/note="DNA sequence coding for the BACE N->Q R57K."

Alignment of: us-10-726-967a-1 x CQ772950 ..

Alignment segment 1/1: (-)

Quality: 28.00

Matching length: 11

Matching Percent Similarity: 81.82

Total length: 11

Matching Percent Identity: 45.45

Total Percent Similarity: 81.82

Total Percent Identity: 45.45

Gaps: 0

Score: 295

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

185 AAGCTGCCCTTCGGCGCGGCTCTCGGCTCT

153

Sequence name: rgep2ndb:AR178470

Sequence documentation:

LOCUS AR178470

DEFINITION Sequence 3 from patent US 6319689.

ACCESSION AR178470

VERSION AR178470.1 GI:20219608

KEYWORDS

SOURCE

ORGANISM

REFERENCE 1 (bases 1 to 2370)

AUTHORS Powell,D.J., Chapman,C.G., Murphy,K. and Smith,T.S.

TITLE ASP2

JOURNAL Patent: US 6319689-A 3 20-NOV-2001;

KEYWORDS Location/Qualifiers

1. 2370

/organism="unknown"

/mol_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR178470 ..

Alignment segment 1/1: (+)

Quality: 28.00

Matching length: 12

Matching Percent Similarity: 83.33

Total length: 16

Matching Percent Identity: 58.33

Total Percent Similarity: 62.50

Total Percent Identity: 43.75

Gaps: 1

Score: 296

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro

1083 CGCTTGCCATGTCACATGATTCAGACGCGCAGCGTGAAGGCC

1130

Sequence name: rgep2ndb:E50817

Sequence documentation:

LOCUS E50817

DEFINITION Aspartate protease ASP2.

ACCESSION E50817

VERSION E50817.1 GI:13023200

KEYWORDS JP 2000060579-A/2.

SOURCE

ORGANISM

REFERENCE 1 (bases 1 to 2370)

AUTHORS David,J.P., Conrad,G.C., Kay,M. and Trudy,S.S.

TITLE Aspartate proteinase ASP2

JOURNAL Patent: JP 2000060579-A 2 29-FEB-2000;

KEYWORDS SMITHKLINE BEECHAM CORP

FEATURES

LOCATION/Qualifiers

OS

PN

PD

PF

PI

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

Quality: 27

Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00
Total Percent Similarity: 66.67 Total Percent Identity: 50.00
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR224095

Sequence documentation: 2043 bp DNA linear PAT 26-SEP-2002

LOCUS AR224095
DEFINITION Sequence 7 from patent US 6440698.
ACCESSION AR224095
VERSION AR224095.1 GI:23332755
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.
REFERENCE 1 (bases 1 to 2043)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6440698-A 7 27-AUG-2002;
FEATURES Location/Qualifiers
source 1..2043
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224095 ..

Alignment segment 1/1: (-)

Quality: 27.00 BaseScore: 299
Matching length: 12 Total length: 12
Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00
Total Percent Similarity: 66.67 Total Percent Identity: 50.00
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR269226

Sequence documentation: 2043 bp DNA linear PAT 10-APR-2003

LOCUS AR269226
DEFINITION Sequence 7 from patent US 6500667.
ACCESSION AR269226
VERSION AR269226.1 GI:29700194
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.
REFERENCE 1 (bases 1 to 2043)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Apatarvyl protease 2 (ap2) antisense oligonucleotides
JOURNAL Patent: US 6500667-A 7 31-DEC-2002;
FEATURES Location/Qualifiers
source 1..2043
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269226 ..

Alignment segment 1/1: (-)

Quality: 27.00 BaseScore: 299
Matching length: 12 Total length: 12
Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00
Total Percent Similarity: 66.67 Total Percent Identity: 50.00
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR478780

Sequence documentation: 2043 bp DNA linear PAT 14-MAY-2004

LOCUS AR478780
DEFINITION Sequence 7 from patent US 6699671.
ACCESSION AR478780
VERSION AR478780.1 GI:47237500
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.
REFERENCE 1 (bases 1 to 2043)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
JOURNAL Patent: US 6699671-A 7 02-MAR-2004;
FEATURES Location/Qualifiers
source 1..2043
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478780 ..

Alignment segment 1/1: (-)

Quality: 27.00 BaseScore: 299
Matching length: 12 Total length: 12
Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00
Total Percent Similarity: 66.67 Total Percent Identity: 50.00
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR487347

Sequence documentation: 2043 bp DNA linear PAT 14-MAY-2004

LOCUS AR487347
DEFINITION Sequence 7 from patent US 6706485.
ACCESSION AR487347
VERSION AR487347.1 GI:47252445
KEYWORDS
SOURCE Unknown.
ORGANISM Unclassified.
REFERENCE 1 (bases 1 to 2043)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 7 16-MAR-2004;
FEATURES Location/Qualifiers
source 1..2043
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487347 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38
1562 AGGGAACCAACCAGATGTGCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR531986

Sequence documentation: 2043 bp DNA linear PAT 08-OCT-2004
LOCUS AR531986
DEFINITION Sequence 7 from patent US 6727074.
ACCESSION AR531986
VERSION AR531986.1 GI:53920520
KEYWORDS
SOURCE
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 2043)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6727074-A 7 27-APR-2004;
FEATURES
source 1. .2043
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531986 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38
1562 AGGGAACCAACCAGATGTGCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR540888

Sequence documentation: 2043 bp DNA linear PAT 08-OCT-2004
LOCUS AR540888
DEFINITION Sequence 7 from patent US 6737510.
ACCESSION AR540888
VERSION AR540888.1 GI:53932401
KEYWORDS
SOURCE Unknown.

ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2043)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6737510-A 7 18-MAY-2004;
FEATURES
source 1. .2043
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540888 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38
1562 AGGGAACCAACCAGATGTGCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR560097

Sequence documentation: 2043 bp DNA linear PAT 08-OCT-2004
LOCUS AR560097
DEFINITION Sequence 7 from patent US 6753163.
ACCESSION AR560097
VERSION AR560097.1 GI:53970464
KEYWORDS
SOURCE Unknown.

ORGANISM Unknown.
REFERENCE 1 (bases 1 to 2043)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6753163-A 7 22-JUN-2004;
FEATURES
source 1. .2043
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560097 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38
1562 AGGGAACCAACCAGATGTGCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AX105389

Sequence documentation: 2043 bp DNA linear PAT 30-APR-2001
LOCUS AX105389
DEFINITION Sequence 7 from Patent WO0123533.
ACCESSION AX105389
VERSION AX105389.1 GI:13921513
KEYWORDS
SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus (house mouse)
REFERENCE 1
AUTHORS Buzayova; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
TITLE Gurney,M. and Bienkowski,M.J.
JOURNAL Alzheimer's disease secretase, app substrates therefor, and uses therefor
Patent: WO 0123533-A 7 05-APR-2001;
Pharmacia & Upjohn Company (US)

PR 23-SEP-1999 JP 2000574268
PR 24-SEP-1998 US 60/101594
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI
HEINRIKSON,
PI LUIS A PARODI, RIQIANG YAN
PC C12N15/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC
C12N1/19,
PC C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/15,
G01N33/50// (C12N1/21, C12R1/19), C12N15/00, C12N5/00 CC
Alzheimer's disease secretase
FH Key Location/Qualifiers
FT source 1. 1278
FT Location/Qualifiers

1. 1278
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235898 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 Argserg1yLeug1yG1yAlaPro
||||:|||||
242 AGGAAGGGGTGGGGCGCAGCACCC

38
219

Sequence name: rgep2ndb:AR224104

Sequence documentation:

LOCUS AR224104 1278 bp DNA linear PAT 26-SEP-2002
DEFINITION Sequence 27 from patent US 6440698.
ACCESSION AR224104
VERSION AR224104.1 GI:23332764

KEYWORDS
SOURCE
ORGANISM

Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and Yan, R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6440698-A 27 27-AUG-2002;
FEATURES location/Qualifiers
source 1. 1278
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224104 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 Argserg1yLeug1yG1yAlaPro
||||:|||||

38

242 AGGAAGGGGTGGGGCGCAGCACCC

219

Sequence name: rgep2ndb:AR269235

Sequence documentation:

LOCUS AR269235 1278 bp DNA linear PAT 10-APR-2003
DEFINITION Sequence 27 from patent US 6500667.
ACCESSION AR269235
VERSION AR269235.1 GI:29700203
KEYWORDS
SOURCE
ORGANISM

Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and Yan, R.
TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides
JOURNAL Patent: US 6500667-A 27 31-DEC-2002;
FEATURES location/Qualifiers
source 1. 1278
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269235 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 Argserg1yLeug1yG1yAlaPro
||||:|||||
242 AGGAAGGGGTGGGGCGCAGCACCC

38
219

Sequence name: rgep2ndb:AR478790

Sequence documentation:

LOCUS AR478790 1278 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 27 from patent US 6699671.
ACCESSION AR478790
VERSION AR478790.1 GI:47237510

KEYWORDS
SOURCE
ORGANISM

Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1278)

AUTHORS Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and Yan, R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor
JOURNAL Patent: US 6699671-A 27 02-MAR-2004;
FEATURES location/Qualifiers
source 1. 1278
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478790 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
||||:|||||
242 AGGAAGGGGTGGGGCAGCACCC

38
219

Sequence name: rgep2ndb:AR487356

Sequence documentation:
LOCUS AR487356 1278 bp DNA linear PAT 14-MAY-2004
DEFINITION Sequence 27 from patent US 6706485.
ACCESSION AR487356
VERSION AR487356.1 GI:47252454
KEYWORDS
SOURCE
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1278)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Method of identifying agents that inhibit APP processing activity
JOURNAL Patent: US 6706485-A 27 16-MAR-2004;
FEATURES
source
1..1278
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487356 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
||||:|||||
242 AGGAAGGGGTGGGGCAGCACCC

38
219

Sequence name: rgep2ndb:AR531996

Sequence documentation:
LOCUS AR531996 1278 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 27 from patent US 6727074.
ACCESSION AR531996
VERSION AR531996.1 GI:53920530
KEYWORDS
SOURCE
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1278)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6727074-A 27 27-APR-2004;
FEATURES
source
1..1278
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531996 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
||||:|||||
242 AGGAAGGGGTGGGGCAGCACCC

38
219

Sequence name: rgep2ndb:AR540897

Sequence documentation:
LOCUS AR540897 1278 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 27 from patent US 6737510.
ACCESSION AR540897
VERSION AR540897.1 GI:53932410
KEYWORDS
SOURCE
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1278)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6737510-A 27 18-MAY-2004;
FEATURES
source
1..1278
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540897 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
||||:|||||
242 AGGAAGGGGTGGGGCAGCACCC

38
219

Sequence name: rgep2ndb:AR560107

Sequence documentation:
LOCUS AR560107 1278 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 27 from patent US 6753163.
ACCESSION AR560107
VERSION AR560107.1 GI:53970474
KEYWORDS
SOURCE
ORGANISM Unknown.
Unclassified.

REFERENCE 1 (bases 1 to 1278)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6753163-A 27 22-JUN-2004;
FEATURES
source
1..1278
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560107 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50

Total Percent Similarity: 87.50 Total Percent Identity: 62.50
Gaps: 0

Alignment:

31 ArgSerGlyLeuGlyAlaPro 38
|||||
242 AGGAAGGGGTGGGGGCGACACCC 219

Sequence name: rgep2ndb:AX105409

Sequence documentation: 1278 bp DNA linear PAT 30-APR-2001

LOCUS AX105409
DEFINITION Sequence 27 from Patent WO0123533.
ACCESSION AX105409
VERSION AX105409.1 GI:13921523
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Gurney, M. and Bienkowski, M.J.
AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses
TITL therefor
JOURNAL Patent: WO 0123533-A 27 05-APR-2001;
Pharmacia & Upjohn Company (US)

FEATURES
source
1. 1278
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105409 ..

Alignment segment 1/1: (-)

Quality: 26.00
Matching length: 8
Total length: 302
Matching Percent Similarity: 87.50 Matching Percent Identity: 62.50
Total Percent Similarity: 87.50 Total Percent Identity: 62.50
Gaps: 0

Alignment:

31 ArgSerGlyLeuGlyAlaPro 38
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242 AGGAAGGGGTGGGGGCGACACCC 219

Sequence name: rgep2ndb:AX573847

Sequence documentation: 1278 bp DNA linear PAT 07-JAN-2003

LOCUS AX573847
DEFINITION Sequence 27 from Patent EP1249498.
ACCESSION AX573847
VERSION AX573847.1 GI:27551489
KEYWORDS
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Gurney, M. and Bienkowski, M.J.
AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses
TITL therefor
JOURNAL Patent: BP 1249498-A 27 16-OCT-2002;
Pharmacia & Upjohn Company (US)

FEATURES
source
1. 1278
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573847 ..

Alignment segment 1/1: (-)

Quality: 26.00
Matching length: 8
Total length: 302
Matching Percent Similarity: 87.50 Matching Percent Identity: 62.50
Total Percent Similarity: 87.50 Total Percent Identity: 62.50
Gaps: 0

Alignment:

31 ArgSerGlyLeuGlyAlaPro 38
|||||
242 AGGAAGGGGTGGGGGCGACACCC 219

Sequence name: rgep2ndb:CQ772944

Sequence documentation: 1365 bp DNA linear PAT 04-MAR-2004

LOCUS CQ772944
DEFINITION Sequence 9 from Patent WO2004011641.
ACCESSION CQ772944
VERSION CQ772944.1 GI:45126408
KEYWORDS
SOURCE synthetic construct
ORGANISM other sequences; artificial sequences.
REFERENCE 1 Villard, L.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and
AUTHORS Shah, A.
TITL Crystal structure of beta-site app-cleaving enzyme (bace)
JOURNAL Patent: WO 2004011641-A 9 05-FEB-2004;
Astell Technology Limited (GB)

FEATURES
source
1. 1365
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE WT R57DEL."

Alignment of: us-10-726-967a-1 x CQ772944 ..

Alignment segment 1/1: (-)

Quality: 26.00
Matching length: 8
Total length: 302
Matching Percent Similarity: 87.50 Matching Percent Identity: 62.50
Total Percent Similarity: 87.50 Total Percent Identity: 62.50
Gaps: 0

Alignment:

31 ArgSerGlyLeuGlyAlaPro 38
|||||
329 AGGAAGGGGTGGGGGCGACACCC 306

Sequence name: rgep2ndb:CQ772940

Sequence documentation: 1368 bp DNA linear PAT 04-MAR-2004

LOCUS CQ772940
DEFINITION Sequence 5 from Patent WO2004011641.
ACCESSION CQ772940
VERSION CQ772940.1 GI:45126406
KEYWORDS
SOURCE synthetic construct
ORGANISM other sequences; artificial sequences.
REFERENCE 1 Villard, L.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and
AUTHORS Shah, A.
TITL Crystal structure of beta-site app-cleaving enzyme (bace)
JOURNAL Patent: WO 2004011641-A 9 05-FEB-2004;
Astell Technology Limited (GB)

FEATURES
source
1. 1368
/organism="synthetic construct"
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/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE WT R57DEL."

JOURNAL Patent: WO 2004011641-A 5 05-FEB-2004;
Astex Technology Limited (GB)
Location/Qualifiers

1. .1368
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE WT R56KR57K."

Alignment of: us-10-726-967a-1 x CQ772940 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
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Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyAlaPro
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332 AGGAAGGGGTGGGGCAGCACCC

38
309

Sequence name: rgep2ndb:CQ772948

Sequence documentation:

LOCUS CQ772948 1368 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 13 from Patent WO2004011641.
ACCESSION CQ772948
VERSION CQ772948.1 GI:45126410

KEYWORDS
SOURCE
ORGANISM
synthetic construct
synthetic construct
other sequences; artificial sequences.

REFERENCE
1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

AUTHORS
TITLE
CRYSTAL structure of beta-site app-cleaving enzyme (bace)
mutantand uses thereof
Patent: WO 2004011641-A 13 05-FEB-2004;

JOURNAL
Astex Technology Limited (GB)
Location/Qualifiers

FEATURES
1. .1368
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE N->Q R56KR57K no

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Alignment of: us-10-726-967a-1 x CQ772948 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyAlaPro
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332 AGGAAGGGGTGGGGCAGCACCC

38
309

Sequence name: rgep2ndb:CQ772952

Sequence documentation:

LOCUS CQ772952 1383 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 17 from Patent WO2004011641.
ACCESSION CQ772952

VERSION CQ772952.1 GI:45126412

KEYWORDS
SOURCE
ORGANISM
synthetic construct
synthetic construct
other sequences; artificial sequences.

REFERENCE
1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

AUTHORS
TITLE
CRYSTAL structure of beta-site app-cleaving enzyme (bace)
mutantand uses thereof
Patent: WO 2004011641-A 17 05-FEB-2004;

JOURNAL
Astex Technology Limited (GB)
Location/Qualifiers

FEATURES
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/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE N->Q R57DEL."

Alignment of: us-10-726-967a-1 x CQ772952 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyAlaPro
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329 AGGAAGGGGTGGGGCAGCACCC

38
306

Sequence name: rgep2ndb:CQ772946

Sequence documentation:

LOCUS CQ772946 1386 bp DNA linear PAT 04-MAR-2004
DEFINITION Sequence 11 from Patent WO2004011641.
ACCESSION CQ772946
VERSION CQ772946.1 GI:45126409

KEYWORDS
SOURCE
ORGANISM
synthetic construct
synthetic construct
other sequences; artificial sequences.

REFERENCE
1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

AUTHORS
TITLE
CRYSTAL structure of beta-site app-cleaving enzyme (bace)
mutantand uses thereof
Patent: WO 2004011641-A 11 05-FEB-2004;

JOURNAL
Astex Technology Limited (GB)
Location/Qualifiers

FEATURES
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="DNA sequence coding for the BACE N->Q R56KR57K."

Alignment of: us-10-726-967a-1 x CQ772946 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
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Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyAlaPro

38

||||:|||||
332 AGGAGGGGTGGGGGCGACGACCC

309

Sequence name: rgep2ndb:AR178470

Sequence documentation:

LOCUS AR178470 2370 bp DNA linear PAT 20-APR-2002
DEFINITION Sequence 3 from patent US 6319689.
ACCESSION AR178470
VERSION AR178470.1 GI:20219608
KEYWORDS
SOURCE
ORGANISM
REFERENCE 1 (bases 1 to 2370)
AUTHORS Powell,D.J., Chapman,C.G., Murphy,K. and Smith,T.S.
TITLE ASP2
JOURNAL Patent: US 6319689-A 3 20-NOV-2001;
FEATURES
source 1. .2370
/organism="unknown"
/mol_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR178470 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	303
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgsergyleuGlyAlaPro
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155 AGGAGGGGTGGGGGCGACGACCC

38
132

Sequence name: rgep2ndb:ES0817

Sequence documentation:

LOCUS ES0817 2370 bp DNA linear PAT 18-JUN-2001
DEFINITION Aspartate proteinase ASP2.
ACCESSION ES0817
VERSION ES0817.1 GI:13023200
KEYWORDS UP 2000060579-A/2.
SOURCE unidentified
ORGANISM unidentified
REFERENCE 1 (bases 1 to 2370)
AUTHORS David,J.P., Conrad,G.C., Kay,M. and Trudy,S.S.
TITLE Aspartate proteinase ASP2
JOURNAL Patent: JP 2000060579-A 2 29-FEB-2000;
FEATURES
source OS Unidentified
PN JP 2000060579-A/2
PD 29-FEB-2000
PF 03-AUG-1999 JP 1999219665
PR 28-JAN-1997 GB 9701684:4
PI DAVID J POWERU,CONRAD G CHAPPMAN, KAY MARI, TRUDY S SMITH PC
C12N15/09,A61K31/7088,A61K38/46,A61K39/00,A61K39/395, PC
A61K39/395,A61K48/00,
PC A61P25/28,A61P35/00,A61P43/00,C07K16/40,C12N1/15,C12N1/19, PC
C12N1/21,
PC C12N5/10,C12N9/64,C12Q1/37,G01N33/15,G01N33/50,G01N33/53, PC
G01N33/566,
PC G01N33/577//C12P21/08,C12N15/00,A61K37/54,C12N5/00 CC
Strandedness: Single;
CC Topology: linear;
FH Key Location/Qualifiers
FT source 1. .2370
/organism="Unidentified".

FEATURES
source 1. .2370
/organism="unidentified"
/mol_type="genomic DNA"
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Alignment of: us-10-726-967a-1 x ES0817 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	303
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgsergyleuGlyAlaPro
||||:|||||
155 AGGAGGGGTGGGGGCGACGACCC

38
132

Sequence name: rgep2ndb:AX002657

Sequence documentation:

LOCUS AX002657 2370 bp DNA linear PAT 10-MAR-2000
DEFINITION Sequence 3 from Patent EP0855444.
ACCESSION AX002657
VERSION AX002657.1 GI:7242134
KEYWORDS
SOURCE unidentified
ORGANISM unidentified
REFERENCE 1 (bases 1 to 2370)
AUTHORS Murphy,K. and Chapman,C.G.
TITLE Aspartic proteinase 2 (ASP2)
JOURNAL Patent: EP 0855444-A 3 29-JUL-1998;
FEATURES
source 1. .2370
/organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"

Alignment of: us-10-726-967a-1 x AX002657 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	303
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgsergyleuGlyAlaPro
||||:|||||
155 AGGAGGGGTGGGGGCGACGACCC

38
132

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OM of: us-10-726-967a-1 to: rnpb2ndb:* out_format : pfs
Date: Wed Aug 3 11:57:29 2005

About: Results were produced by the GenCore software, version 5.1.6,
Copyright (c) 1993-2005 CompuGen Ltd.

Command line parameters:

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-LOOPEXT=0 -UNITS=b1b1e -START=22 -END=41 -MATRIX=b1b1eum62 -TRANS=human0.cdi
-LIST=500 -DOCALLIGN=100 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=500
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Search information:

Query: us-10-726-967a-1
Query length: 20
Database: rnpb2ndb:*
Database sequences: 210
Database length: 400974
Search time (sec): 13

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rnpb2ndb:US-09-794-743-50	104.00	62.08	47.21	1287	1	Sequence 50, Application
rnpb2ndb:US-09-794-748-50	104.00	62.08	47.21	1287	1	Sequence 50, Application
rnpb2ndb:US-09-794-925-50	104.00	62.08	47.21	1287	1	Sequence 50, Application
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rnpb2ndb:US-10-627-473-9	104.00	62.04	47.45	1365	1	Sequence 9, Application
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rnpb2ndb:US-10-627-473-5	104.00	62.04	47.45	1366	1	Sequence 5, Application
rnpb2ndb:US-10-627-473-7	104.00	62.04	47.45	1366	1	Sequence 7, Application
rnpb2ndb:US-10-627-473-13	104.00	62.04	47.45	1368	1	Sequence 13, Application
rnpb2ndb:US-10-281-092-7	104.00	62.04	47.46	1371	1	Sequence 7, Application
rnpb2ndb:US-09-794-927-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-09-794-927-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-09-794-743-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-09-794-748-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
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rnpb2ndb:US-09-795-847-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-09-794-743-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
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rnpb2ndb:US-09-869-414-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-09-869-414-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-09-548-366-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-09-548-366-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-652-927-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-652-827-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-652-830-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-652-830-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-652-830-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-652-830-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-476-935-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-476-935-23	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-476-935-31	104.00	62.03	47.49	1380	1	Sequence 23, Application
rnpb2ndb:US-10-940-867-31	104.00	62.03	47.49	1380	1	Sequence 31, Application
rnpb2ndb:US-10-940-867-23	104.00	62.03	47.49	1380	1	Sequence 31, Application
rnpb2ndb:US-10-477-076-31	104.00	62.03	47.49	1380	1	Sequence 31, Application
rnpb2ndb:US-10-477-076-23	104.00	62.03	47.49	1380	1	Sequence 31, Application
rnpb2ndb:US-10-627-473-17	104.00	62.03	47.50	1383	1	Sequence 17, Application
rnpb2ndb:US-10-627-473-3	104.00	62.03	47.51	1386	1	Sequence 3, Application
rnpb2ndb:US-10-627-473-11	104.00	62.03	47.51	1386	1	Sequence 11, Application
rnpb2ndb:US-10-627-473-15	104.00	62.03	47.51	1386	1	Sequence 15, Application
rnpb2ndb:US-10-214-932-103	104.00	61.97	47.85	1506	1	Sequence 103, Application
rnpb2ndb:US-10-372-330-8	104.00	61.97	47.85	1506	1	Sequence 8, Application
rnpb2ndb:US-10-281-092-5	104.00	61.97	47.85	1506	1	Sequence 5, Application
rnpb2ndb:US-10-275-339A-6	104.00	61.96	47.90	1527	1	Sequence 6, Application
rnpb2ndb:US-10-322-684-1	104.00	61.95	47.94	1542	1	Sequence 1, Application
rnpb2ndb:US-09-794-927-5	104.00	61.78	48.97	1977	1	Sequence 5, Application
rnpb2ndb:US-09-795-847-5	104.00	61.78	48.97	1977	1	Sequence 5, Application
rnpb2ndb:US-09-794-743-5	104.00	61.78	48.97	1977	1	Sequence 5, Application
rnpb2ndb:US-09-794-748-5	104.00	61.78	48.97	1977	1	Sequence 5, Application
rnpb2ndb:US-09-794-748-21	104.00	61.78	48.97	1977	1	Sequence 5, Application
rnpb2ndb:US-09-794-925-5	104.00	61.78	48.97	1977	1	Sequence 5, Application
rnpb2ndb:US-09-681-442-5	104.00	61.78	48.97	1977	1	Sequence 5, Application
rnpb2ndb:US-09-808-943A-3	104.00	61.78	48.97	1977	1	Sequence 3, Application
rnpb2ndb:US-09-869-414-5	104.00	61.78	48.97	1977	1	Sequence 5, Application

rnbp2ndb:US-10-627-473-9 - 26.00 39.33 373.81 1365 | Sequence 9, Application US
rnbp2ndb:US-10-627-473-5 - 26.00 39.32 373.83 1368 | Sequence 5, Application US
rnbp2ndb:US-10-627-473-13 - 26.00 39.32 373.83 1368 | Sequence 13, Application US
rnbp2ndb:US-10-627-473-17 - 26.00 39.32 373.83 1368 | Sequence 17, Application US
rnbp2ndb:US-10-627-473-11 - 26.00 39.31 373.95 1386 | Sequence 11, Application US
rnbp2ndb:US-09-966-671A-3 - 26.00 38.94 378.75 2370 | Sequence 3, Application US
rnbp2ndb:US-10-308-365-3 - 26.00 38.94 378.75 2370 | Sequence 3, Application US
rnbp2ndb:US-10-829-717-3 - 26.00 38.94 378.75 2370 | Sequence 3, Application US

Sequence name: rnbp2ndb:US-09-794-927-50

Sequence documentation:

; Sequence 50, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
; OTHER INFORMATION: delta TM
; US-09-794-927-50

Alignment of: us-10-726-967a-1 x US-09-794-927-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLpr 38
|||||
64 ACCGACGACGCGATCCGCTGCGCGACGCGCTGGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGCGCTG 123

Sequence name: rnbp2ndb:US-09-795-847-50

Sequence documentation:

; Sequence 50, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:

; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
; OTHER INFORMATION: delta TM
; US-09-795-847-50

Alignment of: us-10-726-967a-1 x US-09-795-847-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLpr 38
|||||
64 ACCGACGACGCGATCCGCTGCGCGACGCGCTGGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGCGCTG 123

Sequence name: rnbp2ndb:US-09-794-743-50

Sequence documentation:

; Sequence 50, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23

OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)

Quality:	104.00	Score:	47.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.0000
Total Percent Similarity:	100.00	Total Percent Identity:	100.0000
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgPheProLeuArgSerGlyLeuGlyValAlaPr 38

64 ACCGAGCAGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu 41
114 CTTGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-681-442-50

Sequence documentation:

Sequence 50, Application US/09681442
Patent No. US2002081634A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 1287
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-681-442-50

Alignment of: us-10-726-967a-1 x US-09-681-442-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu 41
114 CTTGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-869-414-50

Sequence documentation:

Sequence 50, Application US/09869414
Publication No. US2003007726A1
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M

CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 1287
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-869-414-50

Alignment of: us-10-726-967a-1 x US-09-869-414-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu 41
114 CTTGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-548-366-50

Sequence documentation:

Sequence 50, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 1287
TYPE: DNA
ORGANISM: Artificial Sequence

FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Ap2(b)
; OTHER INFORMATION: delta TM
US-09-548-366-50

Alignment of: us-10-726-967a-1 x US-09-548-366-50 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnh1sg1y1learg1eupr0leuargserg1yleu1y1alaPr 38
|||||
64 ACCAGCAGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 cleu1y1leu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-927-50

Sequence documentation:

; Sequence 50, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-10-652-927-50

Alignment of: us-10-726-967a-1 x US-10-652-927-50 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnh1sg1y1learg1eupr0leuargserg1yleu1y1alaPr 38
|||||
```

```
64 ACCAGCAGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 cleu1y1leu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-830-50

Sequence documentation:

; Sequence 50, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-10-652-830-50

Alignment of: us-10-726-967a-1 x US-10-652-830-50 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnh1sg1y1learg1eupr0leuargserg1yleu1y1alaPr 38
|||||
64 ACCAGCAGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 cleu1y1leu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-045-50

Sequence documentation:

; Sequence 50, Application US/10652045
; Publication No. US2004016507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925

PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 1287
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Ap2(b) delta TM
US-10-652-045-50

Alignment of: us-10-726-967a-1 x US-10-652-045-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACACGGCATCCGCTGCTCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-476-935-50

Sequence documentation:

Sequence 50, Application US/10476935
Publication No. US20040234976A1
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M1
CURRENT APPLICATION NUMBER: US/10/476,935
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 1287
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Ap2(b)
OTHER INFORMATION: delta TM
US-10-476-935-50

Alignment of: us-10-726-967a-1 x US-10-476-935-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACACGGCATCCGCTGCTCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-477-076-50

Sequence documentation:

Sequence 50, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 1287
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Ap2(b)
OTHER INFORMATION: delta TM
US-10-477-076-50

Alignment of: us-10-726-967a-1 x US-10-477-076-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACACGGCATCCGCTGCTCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-09-794-927-25

Sequence documentation:

Sequence 25, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: US99
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,927
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-25

Alignment of: us-10-726-967a-1 x US-09-794-927-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHtSGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
4 ACTGAGCATGGTATTGCTCTGCCACTGCGTACGGCTCTGGGCTGCTCC 53
38 OleuGlyLeu 41
54 ACTGGGCTCTG 63

Sequence name: rnpb2ndb:US-09-795-847-25

Sequence documentation:

Sequence 25, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: US99
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/795,847
PRIOR FILING DATE: 2001-02-28

PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-25

Alignment of: us-10-726-967a-1 x US-09-795-847-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHtSGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
4 ACTGAGCATGGTATTGCTCTGCCACTGCGTACGGCTCTGGGCTGCTCC 53
38 OleuGlyLeu 41
54 ACTGGGCTCTG 63

Sequence name: rnpb2ndb:US-09-794-743-25

Sequence documentation:

Sequence 25, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: US99
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-743-25

Alignment of: us-10-726-967a-1 x US-09-794-743-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTGACGATGTAATTCGTCTGCCACTGCGTACGCGTCTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpbp2ndb:US-09-794-748-25

Sequence documentation:

```
; Sequence 25, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62801L
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-25
```

Alignment of: us-10-726-967a-1 x US-09-794-748-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTGACGATGTAATTCGTCTGCCACTGCGTACGCGTCTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
```

54 ACTGGGCTCTG

63

Sequence name: rnpbp2ndb:US-09-794-925-25

Sequence documentation:

```
; Sequence 25, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/62801L
; CURRENT APPLICATION NUMBER: US/09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-25
```

Alignment of: us-10-726-967a-1 x US-09-794-925-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTGACGATGTAATTCGTCTGCCACTGCGTACGCGTCTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpbp2ndb:US-09-681-442-25

Sequence documentation:

```
; Sequence 25, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
```


;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 25
;; LENGTH: 1302
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-681-442-25

Alignment of: us-10-726-967a-1 x US-09-681-442-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.3
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTCAGCATGATTTCGTCTGCCACTGCGGTCTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpb2ndb:US-09-869-414-25

Sequence documentation:

;; Sequence 25, Application US/09869414
;; Publication No. US2003007226A1
;; GENERAL INFORMATION:
;; APPLICANT: Belinkowski et al.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; FILE REFERENCE: 28341/6280M
;; CURRENT APPLICATION NUMBER: US/09/869,414
;; PRIOR FILING DATE: 2001-06-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 25
;; LENGTH: 1302
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-869-414-25

Alignment of: us-10-726-967a-1 x US-09-869-414-25 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 47.3
Matching length: 20	Total length: 20

Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTCAGCATGATTTCGTCTGCCACTGCGGTCTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpb2ndb:US-09-548-366-25

Sequence documentation:

;; Sequence 25, Application US/09548366
;; Publication No. US20030104365A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Blenkowski, Michael J.
;; APPLICANT: Heinrichson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
;; FILE REFERENCE: 28341/6280A
;; CURRENT APPLICATION NUMBER: US/09/548,366
;; PRIOR FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 65
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 25
;; LENGTH: 1302
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-548-366-25

Alignment of: us-10-726-967a-1 x US-09-548-366-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.3
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTCAGCATGATTTCGTCTGCCACTGCGGTCTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpb2ndb:US-10-652-927-25

Sequence documentation:

;; Sequence 25, Application US/10652927
;; Publication No. US20040043408A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.

```

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-25

```

Alignment of: us-10-726-967a-1 x US-10-652-927-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGCTATTGCTGCCACTGCGTACGGTCTGGGTGCTCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

```

Sequence name: rnpb2ndb:US-10-652-830-25

Sequence documentation:

```

; Sequence 25, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302

```

```

; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-25

```

Alignment of: us-10-726-967a-1 x US-10-652-830-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGCTATTGCTGCCACTGCGTACGGTCTGGGTGCTCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

```

Sequence name: rnpb2ndb:US-10-652-045-25

Sequence documentation:

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; Sequence 25, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-25

```

Alignment of: us-10-726-967a-1 x US-10-652-045-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGCTATTGCTGCCACTGCGTACGGTCTGGGTGCTCTCC 53
|||||
38 oLeuGlyLeu 41

```

|||||
54 ACTGGGCTCTG

63

Sequence name: rnpbp2ndb:US-10-476-935-25

Sequence documentation:

; Sequence 25, Application US/10476935
; Publication No. US20040234976A1

; GENERAL INFORMATION:

; APPLICANT: Belinkowski et al.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

; FILE REFERENCE: 28344/6280M1

; CURRENT APPLICATION NUMBER: US/10/476,935

; PRIORITY FILING DATE: 2003-11-06

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 25

; LENGTH: 1302

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-476-935-25

Alignment of: us-10-726-967a-1 x US-10-476-935-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 Thrglnh1sgly1leargLeuProleuArgSergIyleuGIyAlaPr 38
|||||
4 ACTGAGCATGGATTGCTGCTGCACTGCGTAGCGGCTGCGGTGCTCC 53
|||||
38 oLeuGIyleu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rnpbp2ndb:US-10-940-867-25

Sequence documentation:

; Sequence 25, Application US/10940867
; Publication No. US20050026256A1

; GENERAL INFORMATION:

; APPLICANT: Gurney, Mark E.

; APPLICANT: Bienkowski, Michael J.

; APPLICANT: Heinrikson, Robert L.

; APPLICANT: Perodi, Luis A.

; APPLICANT: Yan, Riqiang

; APPLICANT: Pharmacia & Upjohn Company

; TITLE OF INVENTION: Alzheimer's Disease Secretase

; FILE REFERENCE: 6177.PCDA

; CURRENT APPLICATION NUMBER: US/10/940,867

; PRIORITY FILING DATE: 2004-09-14

; PRIOR APPLICATION NUMBER: US 09/806,194

; PRIOR FILING DATE: 2001-03-26

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-25

Alignment of: us-10-726-967a-1 x US-10-940-867-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 Thrglnh1sgly1leargLeuProleuArgSergIyleuGIyAlaPr 38
|||||
4 ACTGAGCATGGATTGCTGCTGCACTGCGTAGCGGCTGCGGTGCTCC 53
|||||
38 oLeuGIyleu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rnpbp2ndb:US-10-477-076-25

Sequence documentation:

; Sequence 25, Application US/10477076
; Publication No. US20050080232A1

; GENERAL INFORMATION:

; APPLICANT: Belinkowski et al.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

; FILE REFERENCE: 28344/6280M2

; CURRENT APPLICATION NUMBER: US/10/477,076

; PRIORITY FILING DATE: 2003-11-06

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 25

; LENGTH: 1302

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-477-076-25

Alignment of: us-10-726-967a-1 x US-10-477-076-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 Thrglnh1sgly1leargLeuProleuArgSergIyleuGIyAlaPr 38
|||||
4 ACTGAGCATGGATTGCTGCTGCACTGCGTAGCGGCTGCGGTGCTCC 53
|||||

PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-743-52

Alignment of: us-10-726-967a-1 x US-09-794-743-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTGCCGACGCGCTGGGGGGGCCCC 113
38 OleuGlyLeu 41
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-748-52

Sequence documentation:

Sequence 52, Application US/09794748
Patent No. US20020037315A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: US95
FILE REFERENCE: 28341/62801J
CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-748-52

Alignment of: us-10-726-967a-1 x US-09-794-748-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTGCCGACGCGCTGGGGGGGCCCC 113
38 OleuGlyLeu 41
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-925-52

Sequence documentation:

Sequence 52, Application US/09794925
Patent No. US20020064819A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/62801J
CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-925-52

Alignment of: us-10-726-967a-1 x US-09-794-925-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTGCCGACGCGCTGGGGGGGCCCC 113
38 OleuGlyLeu 41
114 CTGGGGGCTG 123
```

114 CCGGGGCTG

123

Sequence name: rnpbp2ndb:US-09-681-442-52

Sequence documentation:

/ Sequence 52, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ CURRENT FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 52
/ LENGTH: 1305
/ TYPE: DNA
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
/ OTHER INFORMATION: delta TM
/ US-09-681-442-52

Alignment of: us-10-726-967a-1 x US-09-681-442-52 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22 ThrGlnHsGlyIleAArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGCTGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-869-414-52

Sequence documentation:

/ Sequence 52, Application US/09869414
/ Publication No. US20030077226A1
/ GENERAL INFORMATION:
/ APPLICANT: Bienkowski, et al
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ CURRENT FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: Patentin Ver. 2.0

/ SEQ ID NO 52

/ LENGTH: 1305

/ TYPE: DNA

/ ORGANISM: Artificial Sequence

/ FEATURE:

/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)

/ OTHER INFORMATION: delta TM

/ US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22 ThrGlnHsGlyIleAArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGCTGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-548-366-52

Sequence documentation:

/ Sequence 52, Application US/09548366
/ Publication No. US20030104365A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ FILE REFERENCE: 28341/6280A
/ CURRENT APPLICATION NUMBER: US/09/548,366
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 52
/ LENGTH: 1305
/ TYPE: DNA
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
/ OTHER INFORMATION: delta TM
/ US-09-548-366-52

Alignment of: us-10-726-967a-1 x US-09-548-366-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCGCCCTGCGCAGCGGCTGCGGCGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-927-52

Sequence documentation:

```
; Sequence 52, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-10-652-927-52
```

Alignment of: us-10-726-967a-1 x US-10-652-927-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCGCCCTGCGCAGCGGCTGCGGCGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
```

114 CCTGGGGCTG

123

Sequence name: rnpb2ndb:US-10-652-830-52

Sequence documentation:

```
; Sequence 52, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-10-652-830-52
```

Alignment of: us-10-726-967a-1 x US-10-652-830-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCGCCCTGCGCAGCGGCTGCGGCGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-045-52

Sequence documentation:

```
; Sequence 52, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
```

;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 52
;; LENGTH: 1305
;; TYPE: DNA
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-10-652-045-52

Alignment of: us-10-726-967a-1 x US-10-652-045-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCCCTGCGACGCGGCTGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-10-476-935-52

Sequence documentation:
; Sequence 52, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Belkowsk et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-10-476-935-52

Alignment of: us-10-726-967a-1 x US-10-476-935-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCCCTGCGACGCGGCTGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-10-477-076-52

Sequence documentation:

;; Sequence 52, Application US/10477076
;; Publication No. US20050080232A1
;; GENERAL INFORMATION:
;; APPLICANT: Belkowsk et al.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; FILE REFERENCE: 28341/6280M2
;; CURRENT APPLICATION NUMBER: US/10/477,076
;; PRIOR FILING DATE: 2003-11-06
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 52
;; LENGTH: 1305
;; TYPE: DNA
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-10-477-076-52

Alignment of: us-10-726-967a-1 x US-10-477-076-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCCCTGCGACGCGGCTGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-927-21

Sequence documentation:


```
; Sequence 21, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927-21
```

Alignment of: us-10-726-967a-1 x US-09-794-927-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 92
|||||
38 OleuGlyLeu 41
|||||
93 CTTGGGGGCTG 102
```

Sequence name: rnpb2ndb:US-09-795-847-21

Sequence documentation:

```
; Sequence 21, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DB
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
```

```
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-21
```

Alignment of: us-10-726-967a-1 x US-09-795-847-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 92
|||||
38 OleuGlyLeu 41
|||||
93 CTTGGGGGCTG 102
```

Sequence name: rnpb2ndb:US-09-794-743-21

Sequence documentation:

```
; Sequence 21, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-21
```

Alignment of: us-10-726-967a-1 x US-09-794-743-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 47.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 92
38 OleuGlyLeu
|||||
93 CCGGGGGCTG 102
```

Sequence name: rnpbp2ndb.US-09-794-748-21

Sequence documentation:

```
/ Sequence 21, Application US/09794748
/ Patent No. US20020037315A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ FILE REFERENCE: 28341/62801
/ CURRENT APPLICATION NUMBER: US/09/794,748
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 21
/ LENGTH: 1341
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-748-21
```

Alignment of: us-10-726-967a-1 x US-09-794-748-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 47.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 92
38 OleuGlyLeu
|||||
93 CCGGGGGCTG 102
```

Sequence name: rnpbp2ndb.US-09-794-925-21

Sequence documentation:

```
/ Sequence 21, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/62801
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 21
/ LENGTH: 1341
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-925-21
```

Alignment of: us-10-726-967a-1 x US-09-794-925-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 47.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 92
38 OleuGlyLeu
|||||
93 CCGGGGGCTG 102
```

Sequence name: rnpbp2ndb.US-09-681-442-21

Sequence documentation:

```
/ Sequence 21, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/62801
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ PRIOR FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
```

;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 21
;; LENGTH: 1341
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-681-442-21

Alignment of: us-10-726-967a-1 x US-09-681-442-21 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCTGGGGGCTG 102
```

Sequence name: rnpb2ndb:US-09-869-414-21

Sequence documentation:

;; Sequence 21, Application US/09869414
;; Publication No. US20030077226A1
;; GENERAL INFORMATION:
;; APPLICANT: Bienkowski et al.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; FILE REFERENCE: 28341/6280M
;; CURRENT APPLICATION NUMBER: US/09/869,414
;; CURRENT FILING DATE: 2001-06-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 21
;; LENGTH: 1341
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-869-414-21

Alignment of: us-10-726-967a-1 x US-09-869-414-21 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCTGGGGGCTG 102
```

Sequence name: rnpb2ndb:US-09-548-366-21

Sequence documentation:

;; Sequence 21, Application US/09548366
;; Publication No. US20030104365A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrichson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
;; FILE REFERENCE: 28341/6280A
;; CURRENT APPLICATION NUMBER: US/09/548,366
;; CURRENT FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 65
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 21
;; LENGTH: 1341
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-548-366-21

Alignment of: us-10-726-967a-1 x US-09-548-366-21 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCTGGGGGCTG 102
```

Sequence name: rnpb2ndb:US-10-652-927-21

Sequence documentation:

;; Sequence 21, Application US/10652927
;; Publication No. US20040043408A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N3
;; CURRENT APPLICATION NUMBER: US/10/652,927

```

; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-21
```

Alignment of: us-10-726-967a-1 x US-10-652-927-21 ..

```

Alignment segment 1/1: (+)
      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCGGGGGCTG 102
```

Sequence name: rnpbp2ndb:US-10-652-830-21

Sequence documentation:

```

; Sequence 21, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-21
```

Alignment of: us-10-726-967a-1 x US-10-652-830-21 ..

```

Alignment segment 1/1: (+)
      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCGGGGGCTG 102
```

Sequence name: rnpbp2ndb:US-10-652-045-21

Sequence documentation:

```

; Sequence 21, Application US/10652045
; Publication No. US2004016507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-21
```

Alignment of: us-10-726-967a-1 x US-10-652-045-21 ..

```

Alignment segment 1/1: (+)
      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCGGGGGCTG 102
```

Sequence name: rnpbp2ndb:US-10-476-935-21

Sequence documentation:
; Sequence 21, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Belinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-21

Alignment of: us-10-726-967a-1 x US-10-476-935-21 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.4
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnH1sGly11eArGleuProleuArGserGlyLeuGlyAlaPr 38
43 ACCGAGCAGCGCATCCGCTGCGCTGCGCAGCGGCTGCGGGGCGCCCC 92
38 oleuGlyLeu
93 CCTGGGGGCTG 102
```

Sequence name: rnpb2ndb:US-10-940-867-21

Sequence documentation:

Sequence 21, Application US/10940867
Publication No. US20050026256A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heintz, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177, PCPA
CURRENT APPLICATION NUMBER: US/10/940,867
CURRENT FILING DATE: 2004-09-14
PRIOR APPLICATION NUMBER: US 09/806,194
PRIOR FILING DATE: 2001-03-26
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341

TYPE: DNA
ORGANISM: Homo sapiens
US-10-940-867-21

Alignment of: us-10-726-967a-1 x US-10-940-867-21 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.4
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnH1sGly11eArGleuProleuArGserGlyLeuGlyAlaPr 38
43 ACCGAGCAGCGCATCCGCTGCGCTGCGCAGCGGCTGCGGGGCGCCCC 92
38 oleuGlyLeu
93 CCTGGGGGCTG 102
```

Sequence name: rnpb2ndb:US-10-477-076-21

Sequence documentation:

Sequence 21, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-10-477-076-21

Alignment of: us-10-726-967a-1 x US-10-477-076-21 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.4
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnH1sGly11eArGleuProleuArGserGlyLeuGlyAlaPr 38
43 ACCGAGCAGCGCATCCGCTGCGCTGCGCAGCGGCTGCGGGGCGCCCC 92
38 oleuGlyLeu
93 CCTGGGGGCTG 102
```

Sequence name: rnpbp2ndb:US-09-794-927-29

Sequence documentation:

Sequence 29, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark B.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,927
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-29

Alignment of: us-10-726-967a-1 x US-09-794-927-29 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGACGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-795-847-29

Sequence documentation:

Sequence 29, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark B.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28

PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-29

Alignment of: us-10-726-967a-1 x US-09-795-847-29 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGACGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-794-743-29

Sequence documentation:

Sequence 29, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark B.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-743-29

Alignment of: us-10-726-967a-1 x US-09-794-743-29 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYALAPR 38
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGCCCCC 113
38 oLeuGLYleu
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-748-29

Sequence documentation:

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; Sequence 29, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: US98
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-748-29
```

Alignment of: us-10-726-967a-1 x US-09-794-748-29 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYALAPR 38
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGCCCCC 113
38 oLeuGLYleu
114 CCTGGGGGCTG 41
```

114 CCTGGGGGCTG

123

Sequence name: rnpb2ndb:US-09-794-925-29

Sequence documentation:

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; Sequence 29, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280HI
; CURRENT APPLICATION NUMBER: US/09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-925-29
```

Alignment of: us-10-726-967a-1 x US-09-794-925-29 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYALAPR 38
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGCCCCC 113
38 oLeuGLYleu
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-681-442-29

Sequence documentation:

```
; Sequence 29, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
```

```
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-681-442-29
```

Alignment of: us-10-726-967a-1 x US-09-681-442-29 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity:	100.00	20	Matching	Percent Identity:	100.00	20
Total	Percent Similarity:	100.00	0	Total	Percent Identity:	100.00	0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu
|||||
114 CCGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-869-414-29

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Sequence documentation:
/ Sequence 29, Application US/09869414
/ Publication No. US2003007226A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ CURRENT FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-869-414-29
```

Alignment of: us-10-726-967a-1 x US-09-869-414-29 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity:	104.00	20	Matching	Percent Identity:	47.4	20
Total	Percent Similarity: <td>104.00<td>20</td><td>Total</td><td>Percent Identity:<td>47.4<td>20</td></td></td></td>	104.00 <td>20</td> <td>Total</td> <td>Percent Identity:<td>47.4<td>20</td></td></td>	20	Total	Percent Identity: <td>47.4<td>20</td></td>	47.4 <td>20</td>	20

Matching	Percent Similarity:	100.00	0	Matching	Percent Identity:	100.00	0
Total	Percent Similarity: <td>100.00<td>0<td>Total</td><td>Percent Identity:<td>100.00<td>0</td></td></td></td></td>	100.00 <td>0<td>Total</td><td>Percent Identity:<td>100.00<td>0</td></td></td></td>	0 <td>Total</td> <td>Percent Identity:<td>100.00<td>0</td></td></td>	Total	Percent Identity: <td>100.00<td>0</td></td>	100.00 <td>0</td>	0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu
|||||
114 CCGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-548-366-29

```
Sequence documentation:
/ Sequence 29, Application US/09548366
/ Publication No. US20030104365A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Ridgung
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ FILE REFERENCE: 28341/6280A
/ CURRENT APPLICATION NUMBER: US/09/548,366
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-366-29
```

Alignment of: us-10-726-967a-1 x US-09-548-366-29 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity:	104.00	20	Matching	Percent Identity:	47.4	20
Total	Percent Similarity: <td>100.00<td>0</td><td>Total</td><td>Percent Identity:<td>100.00<td>0</td></td></td></td>	100.00 <td>0</td> <td>Total</td> <td>Percent Identity:<td>100.00<td>0</td></td></td>	0	Total	Percent Identity: <td>100.00<td>0</td></td>	100.00 <td>0</td>	0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu
|||||
114 CCGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-652-927-29

Sequence documentation:

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/ Sequence 29, Application US/10652927
/ Publication No. US20040043408A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
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TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-927-29

Alignment of: us-10-726-967a-1 x US-10-652-927-29 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-830-29

Sequence documentation:

Sequence 29, Application US/10652830
Publication No. US20040048303A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N1
CURRENT APPLICATION NUMBER: US/10/652,830
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362

TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-830-29

Alignment of: us-10-726-967a-1 x US-10-652-830-29 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-045-29

Sequence documentation:

Sequence 29, Application US/10652045
Publication No. US20040166507A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N2
CURRENT APPLICATION NUMBER: US/10/652,045
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-045-29

Alignment of: us-10-726-967a-1 x US-10-652-045-29 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
```

|||||
114 CCTGGGCGCTG

123

Sequence name: rnpbp2ndb:US-10-476-935-29

Sequence documentation:

/ Sequence 29, Application US/10476935
/ Publication No. US20040234976A1
/ GENERAL INFORMATION:

/ APPLICANT: Beinkowski et al.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280M1

/ CURRENT APPLICATION NUMBER: US/10/476,935

/ CURRENT FILING DATE: 2003-11-06

/ PRIOR APPLICATION NUMBER: 09/416,901

/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: PatentIn Ver. 2.0

/ SEQ ID NO 29

/ LENGTH: 1362

/ TYPE: DNA

/ ORGANISM: Homo sapiens

US-10-476-935-29

Alignment of: us-10-726-967a-1 x US-10-476-935-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	47.4
Length:	20		20	
Percent Similarity:	100.00		100.00	
Total				
Percent Similarity:	100.00		100.00	
Gaps:	0			
Total				
Percent Identity:	100.00		100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGCTGCCCTTGGCGACGGGCTGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123

Sequence name: rnpbp2ndb:US-10-940-867-29

Sequence documentation:

/ Sequence 29, Application US/10940867

/ Publication No. US2005026256A1

/ GENERAL INFORMATION:

/ APPLICANT: Gurney, Mark E.

/ APPLICANT: Beinkowski, Michael J.

/ APPLICANT: Heinrikson, Robert L.

/ APPLICANT: Parodi, Luis A.

/ APPLICANT: Yan, Riqiang

/ APPLICANT: Pharmacia & Upjohn Company

/ TITLE OF INVENTION: Alzheimer's Disease Secretase

/ FILE REFERENCE: 6177.PCPA

/ CURRENT APPLICATION NUMBER: US/10/940,867

/ CURRENT FILING DATE: 2004-09-14

/ PRIOR APPLICATION NUMBER: US 09/806,194

/ PRIOR FILING DATE: 2001-03-26

/ PRIOR APPLICATION NUMBER: US 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 29

/ LENGTH: 1362

/ TYPE: DNA

/ ORGANISM: Homo sapiens

US-10-940-867-29

Alignment of: us-10-726-967a-1 x US-10-940-867-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	47.4
Length:	20		20	
Percent Similarity:	100.00		100.00	
Total				
Percent Similarity:	100.00		100.00	
Gaps:	0			
Total				
Percent Identity:	100.00		100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGCTGCCCTTGGCGACGGGCTGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123

Sequence name: rnpbp2ndb:US-10-477-076-29

Sequence documentation:

/ Sequence 29, Application US/10477076

/ Publication No. US20050080232A1

/ GENERAL INFORMATION:

/ APPLICANT: Beinkowski et al.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280M2

/ CURRENT APPLICATION NUMBER: US/10/477,076

/ CURRENT FILING DATE: 2003-11-06

/ PRIOR APPLICATION NUMBER: 09/416,901

/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: PatentIn Ver. 2.0

/ SEQ ID NO 29

/ LENGTH: 1362

/ TYPE: DNA

/ ORGANISM: Homo sapiens

US-10-477-076-29

Alignment of: us-10-726-967a-1 x US-10-477-076-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	47.4
Length:	20		20	
Percent Similarity:	100.00		100.00	
Total				
Percent Similarity:	100.00		100.00	
Gaps:	0			
Total				
Percent Identity:	100.00		100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGCTGCCCTTGGCGACGGGCTGGGGGCGCCCC 113
|||||

38 olenuGlyLeu
|||||
114 CCTGGGGCTG

41

123

Sequence name: rnpb2ndb:US-10-372-473-8

Sequence documentation:

Sequence 8, Application US/10372473
Publication No. US20040005691A1
GENERAL INFORMATION:
APPLICANT: Chou, Kuo-Chen
APPLICANT: Howe, W. Jeffery
TITLE OF INVENTION: Modified BACE
FILE REFERENCE: MBHB 01-1766-A
CURRENT APPLICATION NUMBER: US/10/372,473
CURRENT FILING DATE: 2003-02-21
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PatentIn version 3.2
SEQ ID NO 8
LENGTH: 1365
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc feature
OTHER INFORMATION: DNA sequence of recombinant human BACE with P33K mutation from B.
US-10-372-473-8

Alignment of: us-10-726-967a-1 x US-10-372-473-8

Alignment segment 1/1: (+)

Matching length:	Quality:	104.00	Score:	47.4
20	20			
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22 ThrGlnH1eGly1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCCAACATGATTCGTCTGCACATCGCTACGCGTCTGGGCTGCTCC 119
38 olenuGlyLeu
|||||
120 ACTGGGCTCTG 129

Sequence name: rnpb2ndb:US-10-627-473-9

Sequence documentation:

Sequence 9, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681
NUMBER OF SEQ ID NOS: 46
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 9
LENGTH: 1365
TYPE: DNA

ORGANISM: Homo sapiens
US-10-627-473-9

Alignment of: us-10-726-967a-1 x US-10-627-473-9

Alignment segment 1/1: (+)

Matching length:	Quality:	104.00	Score:	47.4
20	20			
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22 ThrGlnH1eGly1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCCAACATGATTCGTCTGCACATCGCTACGCGTCTGGGCTGCTCC 119
38 olenuGlyLeu
|||||
120 CCTGGGCTCTG 129

Sequence name: rnpb2ndb:US-10-627-473-1

Sequence documentation:

Sequence 1, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681
NUMBER OF SEQ ID NOS: 46
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 1
LENGTH: 1368
TYPE: DNA
ORGANISM: Homo sapiens
US-10-627-473-1

Alignment of: us-10-726-967a-1 x US-10-627-473-1

Alignment segment 1/1: (+)

Matching length:	Quality:	104.00	Score:	47.5
20	20			
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22 ThrGlnH1eGly1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCCAACATGATTCGTCTGCACATCGCTACGCGTCTGGGCTGCTCC 119
38 olenuGlyLeu
|||||
120 CCTGGGCTCTG 129

Sequence name: rnpb2ndb:US-10-627-473-5

Sequence documentation:

```
; Sequence 5, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 1368
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-5
```

Alignment of: us-10-726-967a-1 x US-10-627-473-5 ..

```
Alignment segment 1/1: (+)
      Quality: 104.00      Matching length: 20      Total length: 47.5
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```
22 ThrglnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
70 ACCGAGCAGCGGCATCCGCTGCGCCCTGCGCAGCGGCGGCGCCCC 119
|||||
38 OleuGlyLeu 41
|||||
120 CCTGGGGCTG 129
```

Sequence name: rnpbp2ndb:US-10-627-473-7

Sequence documentation:

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; Sequence 7, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 1368
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-7
```

Alignment of: us-10-726-967a-1 x US-10-627-473-7 ..

```
Alignment segment 1/1: (+)
      Quality: 104.00      Matching length: 20      Total length: 47.5
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```
22 ThrglnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
70 ACCGAGCAGCGGCATCCGCTGCGCCCTGCGCAGCGGCGGCGCCCC 119
|||||
38 OleuGlyLeu 41
|||||
120 CCTGGGGCTG 129
```

Sequence name: rnpbp2ndb:US-10-627-473-13

Sequence documentation:

```
; Sequence 13, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
; LENGTH: 1368
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-13
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Alignment of: us-10-726-967a-1 x US-10-627-473-13 ..

Alignment segment 1/1: (+)

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      Quality: 104.00      Matching length: 20      Total length: 47.5
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```
22 ThrglnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
70 ACCGAGCAGCGGCATCCGCTGCGCCCTGCGCAGCGGCGGCGCCCC 119
|||||
38 OleuGlyLeu 41
|||||
120 CCTGGGGCTG 129
```

Sequence name: rnpbp2ndb:US-10-281-092-7

Sequence documentation:

```
; Sequence 7, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
```

APPLICANT: Bilcer, Geoffrey
APPLICANT: Chang, Manpin
APPLICANT: Hong, Lin
APPLICANT: Koelsch, Gerald E.
APPLICANT: Loy, Jeffrey A.
APPLICANT: Turner, Robert T., III
APPLICANT: Devasumadrum, Thispeswamy
TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
TITLE OF INVENTION: ACTIVITY AND METHODS OF USE THEREOF
FILE REFERENCE: 2932.1001-004
CURRENT APPLICATION NUMBER: US/10/281.092
CURRENT FILING DATE: 2002-10-23
PRIOR APPLICATION NUMBER: US 10/032,818
PRIOR FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: PCT US01/50826
PRIOR FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: US 60/258,705
PRIOR FILING DATE: 2000-12-28
PRIOR APPLICATION NUMBER: US 60/275,756
PRIOR FILING DATE: 2001-03-14
PRIOR APPLICATION NUMBER: US 60/335,952
PRIOR FILING DATE: 2001-10-23
PRIOR APPLICATION NUMBER: US 60/333,545
PRIOR FILING DATE: 2001-11-27
PRIOR APPLICATION NUMBER: US 60/348,464
PRIOR FILING DATE: 2002-01-14
PRIOR APPLICATION NUMBER: US 60/348,615
PRIOR FILING DATE: 2002-01-14
PRIOR APPLICATION NUMBER: US 60/390,804
PRIOR FILING DATE: 2002-06-20
PRIOR APPLICATION NUMBER: US 60/397,557
PRIOR FILING DATE: 2002-07-19
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 59
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 7
LENGTH: 1371
TYPE: DNA
ORGANISM: Unknown
FEATURE:
OTHER INFORMATION: promemapsin 2-T1
US-10-281-092-7

Alignment of: us-10-726-967a-1 x US-10-281-092-7 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	

Gaps: 0

Alignment:

22 ThrGlnHisGlyLeArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
70 ACCGACGACGCGATCCGCGCTGCCCTGCGACGCGCGCTGCGCGCGCGCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CCTGGGGCTG 129

Sequence name: rnpb2ndb:US-09-794-927-23

Sequence documentation:
Sequence 23, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-23

Alignment of: us-10-726-967a-1 x US-09-794-927-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	

Gaps: 0

Alignment:

22 ThrGlnHisGlyLeArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGCGATCCGCGCTGCCCTGCGACGCGCGCTGCGCGCGCGCC 131
|||||
38 oleuGlyLeu 41
|||||
132 CCTGGGGCTG 141

Sequence name: rnpb2ndb:US-09-794-927-31

Sequence documentation:
Sequence 31, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73

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; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927-31
```

Alignment of: us-10-726-967a-1 x US-09-794-927-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrg1nh1sg1ylea1rgleupProleuA1rgSerg1yleuG1yq1yAla1Apr 38
|||||
64 ACCGACACGCGCATCCGGCTGCGCCCTGCGAGCGGCTGGGGGGGCCCCC 113
38 oleuG1yleu
|||||
114 CCGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-795-847-23

Sequence documentation:

```
; Sequence 23, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-23
```

Alignment of: us-10-726-967a-1 x US-09-795-847-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrg1nh1sg1ylea1rgleupProleuA1rgSerg1yleuG1yq1yAla1Apr 38
|||||
82 ACCGACACGCGCATCCGGCTGCGCCCTGCGAGCGGCTGGGGGGGCCCCC 131
38 oleuG1yleu
|||||
132 CCGGGGGCTG 141
```

Sequence name: rnpbp2ndb:US-09-795-847-31

Sequence documentation:

```
; Sequence 31, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-31
```

Alignment of: us-10-726-967a-1 x US-09-795-847-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrg1nh1sg1ylea1rgleupProleuA1rgSerg1yleuG1yq1yAla1Apr 38
|||||
64 ACCGACACGCGCATCCGGCTGCGCCCTGCGAGCGGCTGGGGGGGCCCCC 113
38 oleuG1yleu
|||||
114 CCGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-794-743-23

Sequence documentation:

```
; Sequence 23, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
```

APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: US/09/794,743
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-743-23

Alignment of: us-10-726-967a-1 x US-09-794-743-23 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Escore: 47.5
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyLeuArgProLeuArgSerGlyLeuGlyValaPr 38
|||||
82 ACCGACGACGCGATCCGCGCTGCCCTGCGACGCGCGCGCGCGCC 131
38 oleuGlyLeu
|||||
132 CCTGGGGCTG 141
```

Sequence name: rnpb2ndb:US-09-794-743-31

Sequence documentation:

Sequence 31, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT FILING DATE: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-743-31

Alignment of: us-10-726-967a-1 x US-09-794-743-31 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Escore: 47.5
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyLeuArgProLeuArgSerGlyLeuGlyValaPr 38
|||||
64 ACCGACGACGCGATCCGCGCTGCCCTGCGACGCGCGCGCGCC 113
38 oleuGlyLeu
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-748-23

Sequence documentation:

Sequence 23, Application US/09794748
Patent No. US20020037315A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT FILING DATE: US/09/794,748
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-748-23

Alignment of: us-10-726-967a-1 x US-09-794-748-23 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Escore: 47.5
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnH1sgly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
82 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCTGGGGGGCGCC 131
|||||
38 OleuGlyLeu 41
|||||
132 CTGGGGGCTG 141
```

Sequence name: rnpb2ndb:US-09-794-748-31

Sequence documentation:

```
; Sequence 31, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT FILING DATE: 2001-02-27
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-31
```

Alignment of: us-10-726-967a-1 x US-09-794-748-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnH1sgly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCTGGGGGGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-925-23

Sequence documentation:

```
; Sequence 23, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
```

```
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
```

```
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-23
```

Alignment of: us-10-726-967a-1 x US-09-794-925-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnH1sgly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
82 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCTGGGGGGCGCC 131
|||||
38 OleuGlyLeu 41
|||||
132 CTGGGGGCTG 141
```

Sequence name: rnpb2ndb:US-09-794-925-31

Sequence documentation:

```
; Sequence 31, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
```


SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-31

Alignment of: us-10-726-967a-1 x US-09-794-925-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTCGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-681-442-23

Sequence documentation:

; Sequence 23, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280FG
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-23

Alignment of: us-10-726-967a-1 x US-09-681-442-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGCGATCCGCTGCCCTCGCGACGCGGCTGGGGGGGCCCC 131
|||||
38 oleuGlyLeu 41
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rnpb2ndb:US-09-681-442-31

Sequence documentation:

; Sequence 31, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280FG
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-31

Alignment of: us-10-726-967a-1 x US-09-681-442-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTCGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-869-414-23

Sequence documentation:

; Sequence 23, Application US/09869414
; Publication No. US2003007226A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414

```

; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-23
```

Alignment of: us-10-726-967a-1 x US-09-869-414-23 ..

Alignment segment 1/1: (+)

Matching	Quality:	Length:	Score:
Percent Similarity:	104.00	20	47.5
Total Percent Similarity:	100.00	20	20
Gaps:	0	0	100.00

Alignment:

```

22 ThrGlnHISgLYlLeArGLeuPProLeuArGserGlyLeuGlyGlyAlaBr 38
82 ACCCAGCAGCGCATCCGCGCTGCCCTGCGCAGCGGCGGCGGCCGCC 131
38 oLeuGlyLeu
132 CTTGGGGGCTG 41
141
```

Sequence name: rnpbp2ndb:US-09-869-414-31

```

Sequence documentation:
; Sequence 31, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Beinikowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-31
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Alignment of: us-10-726-967a-1 x US-09-869-414-31 ..

Alignment segment 1/1: (+)

Matching	Quality:	Length:	Score:
Percent Similarity:	104.00	20	47.5
Total Percent Similarity:	100.00	20	20
Gaps:	0	0	100.00

Alignment:

```

22 ThrGlnHISgLYlLeArGLeuPProLeuArGserGlyLeuGlyGlyAlaBr 38
64 ACCCAGCAGCGCATCCGCGCTGCCCTGCGCAGCGGCGGCGGCCGCC 113
38 oLeuGlyLeu
114 CTTGGGGGCTG 41
123
```

Sequence name: rnpbp2ndb:US-09-548-366-23

Sequence documentation:

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; Sequence 23, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienikowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van, Riklang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366-23
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Alignment of: us-10-726-967a-1 x US-09-548-366-23 ..

Alignment segment 1/1: (+)

Matching	Quality:	Length:	Score:
Percent Similarity:	104.00	20	47.5
Total Percent Similarity:	100.00	20	20
Gaps:	0	0	100.00

Alignment:

```

22 ThrGlnHISgLYlLeArGLeuPProLeuArGserGlyLeuGlyGlyAlaBr 38
82 ACCCAGCAGCGCATCCGCGCTGCCCTGCGCAGCGGCGGCGGCCGCC 131
38 oLeuGlyLeu
132 CTTGGGGGCTG 41
141
```

Sequence name: rnpbp2ndb:US-09-548-366-31

Sequence documentation:

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; Sequence 31, Application US/09548366
; Publication No. US20030104365A1
```

GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riglang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366-31

Alignment of: us-10-726-967a-1 x US-09-548-366-31 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	47.5
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCGGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-927-23

Sequence documentation:

Sequence 23, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 28915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-927-23

Alignment of: us-10-726-967a-1 x US-10-652-927-23 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	47.5
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGCGATCGGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 131
|||||
38 oleuGlyLeu 41
|||||
132 CCTGGGCGCTG 141
```

Sequence name: rnpb2ndb:US-10-652-927-31

Sequence documentation:

Sequence 31, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 28915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-927-31

Alignment of: us-10-726-967a-1 x US-10-652-927-31 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	47.5
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCGGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 113
```

38 oLeuGlyLeu
|||
114 CCGGGGCTG

41
123

Sequence name: rnpb2ndb:US-10-652-830-23

Sequence documentation:

Sequence 23, Application US/10652830
Publication No. US20040048303A1
GENERAL INFORMATION:

APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N1

CURRENT APPLICATION NUMBER: US/10/652,830

PRIOR FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: 09/794,925

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 23

LENGTH: 1380

TYPE: DNA

ORGANISM: Homo sapiens

US-10-652-830-23

Alignment of: us-10-726-967a-1 x US-10-652-830-23 ..

Alignment segment 1/1: (+)

Matching Percent	Similarity: 100.00	Matching Percent	Similarity: 100.00
Quality: 104.00		Score: 47.5	
Length: 20		Length: 20	
Total Similarity: 100.00		Total Identity: 100.00	
Gaps: 0		Total Percent Identity: 100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
82 ACCGAGCAGGATCCGCTGCCCTGGCAGCGGCTGGGGGGCGCCCC 131

38 oLeuGlyLeu
|||
132 CCGGGGCTG 141

Sequence name: rnpb2ndb:US-10-652-830-31

Sequence documentation:

Sequence 31, Application US/10652830
Publication No. US20040048303A1
GENERAL INFORMATION:

APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N1

CURRENT APPLICATION NUMBER: US/10/652,830

PRIOR FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: 09/794,925

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-830-31

Alignment of: us-10-726-967a-1 x US-10-652-830-31 ..

Alignment segment 1/1: (+)

Matching Percent	Similarity: 100.00	Matching Percent	Similarity: 100.00
Quality: 104.00		Score: 47.5	
Length: 20		Length: 20	
Total Similarity: 100.00		Total Identity: 100.00	
Gaps: 0		Total Percent Identity: 100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGAGCAGGATCCGCTGCCCTGGCAGCGGCTGGGGGGCGCCCC 113

38 oLeuGlyLeu
|||
114 CCGGGGCTG 123

Sequence name: rnpb2ndb:US-10-652-045-23

Sequence documentation:

Sequence 23, Application US/10652045
Publication No. US2004016507A1
GENERAL INFORMATION:

APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N2

CURRENT APPLICATION NUMBER: US/10/652,045

PRIOR FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: 09/794,925

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 23

LENGTH: 1380

TYPE: DNA

ORGANISM: Homo sapiens

US-10-652-045-23

Alignment of: us-10-726-967a-1 x US-10-652-045-23 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 47.5
-----------------	-------------

Matching Length: 20 Total Length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
82 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCCCC 131
38 OleuGlyLeu 41
132 CCTGGGGCTG 141

Sequence name: rnpb2ndb:US-10-652-045-31

Sequence documentation:

; Sequence 31, Application US/10652045
; Publication No. US20040165507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29, 925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-31

Alignment of: us-10-726-967a-1 x US-10-652-045-31 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 47.5
Matching Length: 20 Total Length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-10-476-935-23

Sequence documentation:

; Sequence 23, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:

; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-23

Alignment of: us-10-726-967a-1 x US-10-476-935-23 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 47.5
Matching Length: 20 Total Length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
82 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCCCC 131
38 OleuGlyLeu 41
132 CCTGGGGCTG 141

Sequence name: rnpb2ndb:US-10-476-935-31

Sequence documentation:

; Sequence 31, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-31

Alignment of: us-10-726-967a-1 x US-10-476-935-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTCGCGAGCGGCTGGGGGGCCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCGGGGGCTG
|||||
123
```

Sequence name: rnpbp2ndb:US-10-940-867-23

Sequence documentation:

```
; Sequence 23, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-23
```

Alignment of: us-10-726-967a-1 x US-10-940-867-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCCAGCAGCGGATCCGGCTGCCCTCGCGAGCGGCTGGGGGGCCCCC 131
|||||
38 OLeuGlyLeu
|||||
132 CCGGGGGCTG
|||||
141
```

Sequence name: rnpbp2ndb:US-10-940-867-31

Sequence documentation:

```
; Sequence 31, Application US/10940867
```

```
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-31
```

Alignment of: us-10-726-967a-1 x US-10-940-867-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTCGCGAGCGGCTGGGGGGCCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCGGGGGCTG
|||||
123
```

Sequence name: rnpbp2ndb:US-10-477-076-23

Sequence documentation:

```
; Sequence 23, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-477-076-23
```

Alignment of: us-10-726-967a-1 x US-10-477-076-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGCGATCCGCGCTGCCCTCGCGACGCGCGCTGGGGGGCCCC 131
38 oleuglyLeu
|||||
132 CCTGGGGCGCTG 141
```

Sequence name: rnpb2ndb:US-10-477-076-31

Sequence documentation:

```
; Sequence 31, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-477-076-31
```

Alignment of: us-10-726-967a-1 x US-10-477-076-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGCGCTGCCCTCGCGACGCGCGCTGGGGGGCCCC 113
38 oleuglyLeu
|||||
114 CCTGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-10-627-473-17

Sequence documentation:

```
; Sequence 17, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASHY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALBEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; PRIOR FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 17
; LENGTH: 1383
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-17
```

Alignment of: us-10-726-967a-1 x US-10-627-473-17 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
70 ACCGACGACGCGATCCGCGCTGCCCTCGCGACGCGCGCTGGGGGGCCCC 119
38 oleuglyLeu
|||||
120 CCTGGGGCGCTG 129
```

Sequence name: rnpb2ndb:US-10-627-473-3

Sequence documentation:

```
; Sequence 3, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASHY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALBEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; PRIOR FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 1386
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-3
```

Alignment of: us-10-726-967a-1 x US-10-627-473-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22  ThrglnHhsglYlleaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70  ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 119
38  oLeuGlyLeu
120  CCTGGGGGCTG 41
129
```

Sequence name: rnpbp2ndb:US-10-627-473-11

Sequence documentation:

```
; Sequence 11, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASHBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; PRIOR FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
; LENGTH: 1386
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-11
```

Alignment of: us-10-726-967a-1 x US-10-627-473-11 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22  ThrglnHhsglYlleaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70  ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 119
38  oLeuGlyLeu
120  CCTGGGGGCTG 41
129
```

Sequence name: rnpbp2ndb:US-10-627-473-15

Sequence documentation:

```
; Sequence 15, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILARD, LAURENT MICHEL MARIE
```

```
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASHBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; PRIOR FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 15
; LENGTH: 1386
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-15
```

Alignment of: us-10-726-967a-1 x US-10-627-473-15 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22  ThrglnHhsglYlleaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70  ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 119
38  oLeuGlyLeu
120  CCTGGGGGCTG 41
129
```

Sequence name: rnpbp2ndb:US-10-214-932-103

Sequence documentation:

```
; Sequence 103, Application US/10214932
; Publication No. US20030100707A1
; GENERAL INFORMATION:
; APPLICANT: HWANG, Inhwan
; APPLICANT: KIM, Dae Heon
; APPLICANT: LEE, Yong Jik
; TITLE OF INVENTION: SYSTEM FOR DETECTING PROTEASE
; FILE REFERENCE: APB02/US
; CURRENT APPLICATION NUMBER: US/10/214,932
; PRIOR FILING DATE: 2002-08-08
; NUMBER OF SEQ ID NOS: 133
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 103
; LENGTH: 1506
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: gene
; LOCATION: (1)..(1506)
; OTHER INFORMATION: Gene for APP beta-secretase
; NAME/KEY: CDS
; LOCATION: (1)..(1503)
; OTHER INFORMATION: APP beta-secretase
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: GenBank/AF201468
; DATABASE ENTRY DATE: 1999-12-19
US-10-214-932-103
```

Alignment of: us-10-726-967a-1 x US-10-214-932-103 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGCTGCCCTCGCGACGCGCTGGGGGGCCCC 113
|||
38 OleuGlyLeu
|||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-372-730-8

Sequence documentation:

```
; Sequence 8, Application US/10372730
; Publication No. US20030167486A1
; GENERAL INFORMATION:
; APPLICANT: Jacobson, Helmut
; APPLICANT: Mosbach-Ozmen, Laurence
; APPLICANT: Nelibeck-Hochstetter, Peter
; TITLE OF INVENTION: Double transgenic animal model for Alzheimer's Disease
; FILE REFERENCE: Case 21132
; CURRENT APPLICATION NUMBER: US/10/372,730
; PRIOR APPLICATION NUMBER: EP02004331.1
; PRIOR FILING DATE: 2002-03-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 1506
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-10-372-730-8
```

Alignment of: us-10-726-967a-1 x US-10-372-730-8 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGCTGCCCTCGCGACGCGCTGGGGGGCCCC 113
|||
38 OleuGlyLeu
|||
114 TCTGGGACTG 123
```

Sequence name: rnpb2ndb:US-10-281-092-5

Sequence documentation:

```
; Sequence 5, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Wanhin
; APPLICANT: Hong, Lin
```

APPLICANT: Koelsch, Gerald E.

```
; APPLICANT: Loy, Jeffrey A., III
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasumadram, Thippeswamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; FILE REFERENCE: 2932.1001-004
; CURRENT APPLICATION NUMBER: US/10/281,092
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: US 10/032,818
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 5
; LENGTH: 1506
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: memapsin 2
; US-10-281-092-5
```

Alignment of: us-10-726-967a-1 x US-10-281-092-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGCTGCCCTCGCGACGCGCTGGGGGGCCCC 113
|||
38 OleuGlyLeu
|||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-275-339A-6

Sequence documentation:

```
; Sequence 6, Application US/10275339A
; Publication No. US20040110743A1
; GENERAL INFORMATION:
; APPLICANT: MIYAMOTO, Masasumi
; APPLICANT: MATSUI, Junji
; APPLICANT: FUKUMOTO, Hiroaki
; APPLICANT: TAKUI, Naoki
; TITLE OF INVENTION: Beta Secretase Inhibitors
; FILE REFERENCE: 2729 USOP
; CURRENT APPLICATION NUMBER: US/10/275,339A
```

CURRENT FILING DATE: 2003-10-30
PRIOR APPLICATION NUMBER: PCT/JP01/04144
PRIOR FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: JP 2000-152758
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.2
SEQ ID NO 6
LENGTH: 1527
TYPE: DNA
ORGANISM: Homo sapiens
US-10-275-339A-6

Alignment of: us-10-726-967a-1 x US-10-275-339A-6 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnhieglylleargleupProleuArgserglyleuglygylalapr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCGCCCTGCCAGCGGCTGGGGGGCCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-322-684-1

Sequence documentation:
Sequence 1, Application US/10322684
Publication No. US2003012527A1
GENERAL INFORMATION:
APPLICANT: Hoffmann-La Roche Inc.
TITLE OF INVENTION: Assay and screening method for identification of inhibitors of de
TITLE OF INVENTION: secretases
FILE REFERENCE: Case 21066
CURRENT APPLICATION NUMBER: US/10/322,684
CURRENT FILING DATE: 2002-12-18
PRIOR APPLICATION NUMBER: EP0130282.5
PRIOR FILING DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 1542
TYPE: DNA
ORGANISM: Homo sapiens
US-10-322-684-1

Alignment of: us-10-726-967a-1 x US-10-322-684-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnhieglylleargleupProleuArgserglyleuglygylalapr 38
|||||
79 ACCGAGCAGCGCATCCGCTGCGCACTGGCAGCGGACTGGAGGTGCACC 128
|||||
38 oleuglyleu 41
|||||
```

129 TCTGGGACTG

138

Sequence name: rnpbp2ndb:US-09-794-927-5

Sequence documentation:

Sequence 5, Application US/09794927
Patent No. US20010016324A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Van, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280FG

CURRENT APPLICATION NUMBER: US/09/794,927

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 5

LENGTH: 1977

TYPE: DNA

ORGANISM: Homo sapiens

US-09-794-927-5

Alignment of: us-10-726-967a-1 x US-09-794-927-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnhieglylleargleupProleuArgserglyleuglygylalapr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCGCCCTGCCAGCGGCTGGGGGGCCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-795-847-5

Sequence documentation:

Sequence 5, Application US/09795847

Patent No. US20010018208A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280DE

CURRENT APPLICATION NUMBER: US/09/795,847

CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-5

Alignment of: us-10-726-967a-1 x US-09-795-847-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	49
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1g1Y11eArgLeuProLeuArgSerG1YLeuG1YAla1Pr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuG1Yleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-743-5

Sequence documentation:

Sequence 5, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: US8
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-743-5

Alignment of: us-10-726-967a-1 x US-09-794-743-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	49
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1g1Y11eArgLeuProLeuArgSerG1YLeuG1YAla1Pr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuG1Yleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-748-5

Sequence documentation:

Sequence 5, Application US/09794748
Patent No. US20020037315A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: US8
FILE REFERENCE: 28341/6280JL
CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-748-5

Alignment of: us-10-726-967a-1 x US-09-794-748-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	49
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1g1Y11eArgLeuProLeuArgSerG1YLeuG1YAla1Pr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuG1Yleu 41
```


Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCCCGACAGCGGCTGGGGGGCCCC 113
|||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-869-414-5

Sequence documentation:
; Sequence 5, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Beinikowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-5

Alignment of: us-10-726-967a-1 x US-09-869-414-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCCCGACAGCGGCTGGGGGGCCCC 113
|||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-548-366-5

Sequence documentation:
; Sequence 5, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Beinikowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES THEREFOR

FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366-5

Alignment of: us-10-726-967a-1 x US-09-548-366-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCCCGACAGCGGCTGGGGGGCCCC 113
|||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-10-652-927-5

Sequence documentation:

; Sequence 5, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 28915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 60/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-5

Alignment of: us-10-726-967a-1 x US-10-652-927-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCTGGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-652-830-5

Sequence documentation:

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; Sequence 5, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-5
```

Alignment of: us-10-726-967a-1 x US-10-652-830-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCTGGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-652-045-5

Sequence documentation:

```
; Sequence 5, Application US/10652045
; Publication No. US2004016507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-5
```

Alignment of: us-10-726-967a-1 x US-10-652-045-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCTGGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-476-935-5

Sequence documentation:

```
; Sequence 5, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinikowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280N1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
```

SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-5

Alignment of: us-10-726-967a-1 x US-10-476-935-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Basecore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1eGly1IleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-801-487-3

Sequence documentation:

; Sequence 3, Application US/10801487
; Publication No. US20040241792A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281F
; CURRENT APPLICATION NUMBER: US/10/801,487
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-487-3

Alignment of: us-10-726-967a-1 x US-10-801-487-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Basecore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1eGly1IleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-801-938-3

Sequence documentation:

Sequence 3, Application US/10801938
; Publication No. US20040253706A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281D
; CURRENT APPLICATION NUMBER: US/10/801,938
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-938-3

Alignment of: us-10-726-967a-1 x US-10-801-938-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Basecore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1eGly1IleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-801-509-3

Sequence documentation:

; Sequence 3, Application US/10801509
; Publication No. US20040254341A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281C
; CURRENT APPLICATION NUMBER: US/10/801,509
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-509-3

Alignment of: us-10-726-967a-1 x US-10-801-509-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Basecore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
38 OleuGlyLeu 41
|||
114 CCGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-801-486-3

Sequence documentation:

/ Sequence 3, Application US/10801486
/ Publication No. US20040254342A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281B
/ CURRENT APPLICATION NUMBER: US/10/801,486
/ CURRENT FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 1977
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-801-486-3

Alignment of: us-10-726-967a-1 x US-10-801-486-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
38 OleuGlyLeu 41
|||
114 CCGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-940-867-5

Sequence documentation:

/ Sequence 5, Application US/10940867
/ Publication No. US20050026256A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177, PCPA
/ CURRENT APPLICATION NUMBER: US/10/940,867
/ CURRENT FILING DATE: 2004-09-14
/ PRIOR APPLICATION NUMBER: US 09/806,194
/ PRIOR FILING DATE: 2001-03-26
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 5
/ LENGTH: 1977
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-940-867-5

Alignment of: us-10-726-967a-1 x US-10-940-867-5 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
38 OleuGlyLeu 41
|||
114 CCGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-477-076-5

Sequence documentation:

/ Sequence 5, Application US/10477076
/ Publication No. US20050080232A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
/ FILE REFERENCE: 28341/6280M2
/ CURRENT APPLICATION NUMBER: US/10/477,076
/ CURRENT FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1998-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 5
/ LENGTH: 1977
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-477-076-5

Alignment of: us-10-726-967a-1 x US-10-477-076-5 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113

38 olenglyleu
|||||
114 CCTGGGGCTG

41
123

Sequence name: rnpb2ndb:US-10-801-493-3

Sequence documentation:

Sequence 3, Application US/10801493
Publication No. US20050096457A1
GENERAL INFORMATION:
APPLICANT: Yan et al.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/002818
CURRENT APPLICATION NUMBER: US/10/801,493
CURRENT FILING DATE: 2004-03-16
PRIOR APPLICATION NUMBER: 09/908,943
PRIOR FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-10-801-493-3

Alignment of: us-10-726-967a-1 x US-10-801-493-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCGCTGGGGGGCCCC 113
38 olenglyleu
|||||
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-794-927-3

Sequence documentation:

Sequence 3, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280RG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-3

Alignment of: us-10-726-967a-1 x US-09-794-927-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCGCTGGGGGGCCCC 113
38 olenglyleu
|||||
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-795-847-3

Sequence documentation:

Sequence 3, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280RG
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-3

Alignment of: us-10-726-967a-1 x US-09-795-847-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrglnHiaGlytleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu
114 CCGGGGGCTG 41
123
```

Sequence name: rnpbp2ndb:US-09-794-743-3

Sequence documentation:

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; Sequence 3, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-743-3
```

Alignment of: us-10-726-967a-1 x US-09-794-743-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Total length:	49.2
Matching	Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total	Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps:		0			

Alignment:

```
22 ThrglnHiaGlytleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu
114 CCGGGGGCTG 41
123
```

Sequence name: rnpbp2ndb:US-09-794-748-3

Sequence documentation:

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; Sequence 3, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
```

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280UL

CURRENT APPLICATION NUMBER: US/09/794,748

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 3

LENGTH: 2070

TYPE: DNA

ORGANISM: Homo sapiens

US-09-794-748-3

Alignment of: us-10-726-967a-1 x US-09-794-748-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Total length:	49.2
Matching	Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total	Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps:		0			

Alignment:

```
22 ThrglnHiaGlytleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu
114 CCGGGGGCTG 41
123
```

Sequence name: rnpbp2ndb:US-09-794-925-3

Sequence documentation:

```
; Sequence 3, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
```

PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925-3

Alignment of: us-10-726-967a-1 x US-09-794-925-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1eGly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-681-442-3

Sequence documentation:

Sequence 3, Application US/09681442
Patent No. US20020081634A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-681-442-3

Alignment of: us-10-726-967a-1 x US-09-681-442-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1eGly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-908-943A-1

Sequence documentation:

Sequence 1, Application US/09908943A
Publication No. US20030017991A1
GENERAL INFORMATION:
APPLICANT: Yan, Riqiang
APPLICANT: Tomaselli, Alfredo G.
APPLICANT: Gurney, Mark E.
APPLICANT: Emmons, Thomas L.
APPLICANT: Bienkowski, Mike J.
APPLICANT: Heinrichson, Robert L.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281A.US1
CURRENT APPLICATION NUMBER: US/09/908,943A
CURRENT FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-908-943A-1

Alignment of: us-10-726-967a-1 x US-09-908-943A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1eGly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-869-414-3

Sequence documentation:

Sequence 3, Application US/09869414
Publication No. US20030077226A1
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23

```

; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-3
```

Alignment of: us-10-726-967a-1 x US-09-869-414-3 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 49.2
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00
Total Percent Similarity: 100.00	Total Percent Identity: 100.00
Gaps: 0	

Alignment:

```

22 ThrGlnH1sg1y11eargleuProleuArgserGlyleuGlyAlaPr 38
|||||
64 ACCGACGAGGATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rnpbp2ndb:US-09-548-366-3

Sequence documentation:

```

; Sequence 3, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366-3
```

Alignment of: us-10-726-967a-1 x US-09-548-366-3 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 49.2
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00

Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```

22 ThrGlnH1sg1y11eargleuProleuArgserGlyleuGlyAlaPr 38
|||||
64 ACCGACGAGGATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rnpbp2ndb:US-10-652-927-3

Sequence documentation:

```

; Sequence 3, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 60/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-3
```

Alignment of: us-10-726-967a-1 x US-10-652-927-3 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 49.2
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00
Total Percent Similarity: 100.00	Total Percent Identity: 100.00
Gaps: 0	

Alignment:

```

22 ThrGlnH1sg1y11eargleuProleuArgserGlyleuGlyAlaPr 38
|||||
64 ACCGACGAGGATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rnpbp2ndb:US-10-652-830-3

Sequence documentation:

```

; Sequence 3, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
```

TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280N1
CURRENT APPLICATION NUMBER: US/10/652,830
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-830-3

Alignment of: us-10-726-967a-1 x US-10-652-830-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	49.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-045-3

Sequence documentation:

Sequence 3, Application US/10652045
Publication No. US2004016507A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N2
CURRENT APPLICATION NUMBER: US/10/652,045
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA

ORGANISM: Homo sapiens
US-10-652-045-3

Alignment of: us-10-726-967a-1 x US-10-652-045-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	49.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-476-935-3

Sequence documentation:

Sequence 3, Application US/10476935
Publication No. US20040234976A1
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M1
CURRENT APPLICATION NUMBER: US/10/476,935
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-10-476-935-3

Alignment of: us-10-726-967a-1 x US-10-476-935-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	49.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-801-487-1
Sequence documentation:
; Sequence 1, Application US/10801487
; Publication No. US20040241792A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281P
; CURRENT APPLICATION NUMBER: US/10/801,487
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-487-1

Alignment of: us-10-726-967a-1 x US-10-801-487-1 ..
Alignment segment 1/1: (+)
Quality: 104.00
Matching length: 20
Matching Percent Similarity: 100.00
Total length: 49.2
Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGCGGCGGCCCC 113
38 oLeuGlyLeu 41
114 CTTGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-801-938-1
Sequence documentation:
; Sequence 1, Application US/10801938
; Publication No. US20040253706A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281D
; CURRENT APPLICATION NUMBER: US/10/801,938
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-938-1

Alignment of: us-10-726-967a-1 x US-10-801-938-1 ..
Alignment segment 1/1: (+)
Quality: 104.00
Matching length: 20
Matching Percent Similarity: 100.00
Total length: 49.2
Total Percent Identity: 100.00
Gaps: 0

Total Percent Similarity: 100.00
Gaps: 0
Total Percent Identity: 100.00

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGCGGCGGCCCC 113
38 oLeuGlyLeu 41
114 CTTGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-801-509-1
Sequence documentation:
; Sequence 1, Application US/10801509
; Publication No. US20040254341A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281C
; CURRENT APPLICATION NUMBER: US/10/801,509
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-509-1

Alignment of: us-10-726-967a-1 x US-10-801-509-1 ..
Alignment segment 1/1: (+)
Quality: 104.00
Matching length: 20
Matching Percent Similarity: 100.00
Total length: 49.2
Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGCGGCGGCCCC 113
38 oLeuGlyLeu 41
114 CTTGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-801-486-1
Sequence documentation:
; Sequence 1, Application US/10801486
; Publication No. US20040254342A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281B
; CURRENT APPLICATION NUMBER: US/10/801,486
; PRIOR FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-486-1

Alignment of: us-10-726-967a-1 x US-10-801-486-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
|||
38 oLeuGlyLeu 41
|||
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-940-867-3

Sequence documentation:

; Sequence 3, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Rigiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.FCPA
; CURRENT APPLICATION NUMBER: US/10/940, 867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-3

Alignment of: us-10-726-967a-1 x US-10-940-867-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
|||
38 oLeuGlyLeu 41
|||
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-477-076-3

Sequence documentation:

; Sequence 3, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-477-076-3

Alignment of: us-10-726-967a-1 x US-10-477-076-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
|||
38 oLeuGlyLeu 41
|||
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-801-493-1

Sequence documentation:

; Sequence 1, Application US/10801493
; Publication No. US20050096457A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281E
; CURRENT APPLICATION NUMBER: US/10/801,493
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-493-1

Alignment of: us-10-726-967a-1 x US-10-801-493-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGCATCCGGCTGCCCTCGCGCAGCGGCTGGGGGGCCCCC 113
38 OLeuGlyLeu
|||||
114 CCGGGGGCTG
|||||
123
```

Sequence name: rnpbp2ndb:US-10-466-258-1

Sequence documentation:

```
/ Sequence 1, Application US/10466258
/ Publication No. US20040132096A1
/ GENERAL INFORMATION:
/ APPLICANT: GLAXO GROUP LIMITED
/ TITLE OF INVENTION: ASSAY
/ FILE REFERENCE: P80966 GCM
/ CURRENT APPLICATION NUMBER: US/10/466,258
/ CURRENT FILING DATE: 2003-07-15
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: PatentIn version 3.0
/ SEQ ID NO 1
/ LENGTH: 2526
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: CDS
/ LOCATION: (454)..(1959)
US-10-466-258-1
```

Alignment of: us-10-726-967a-1 x US-10-466-258-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
517 ACCCAGCAGCGGCATCCGGCTGCCCTCGCGCAGCGGCTGGGGGGCCCCC 566
38 OLeuGlyLeu
|||||
567 CCGGGGGCTG
|||||
576
```

Sequence name: rnpbp2ndb:US-10-466-391A-1

Sequence documentation:

```
/ Sequence 1, Application US/10466391A
/ Publication No. US20040146953A1
/ GENERAL INFORMATION:
/ APPLICANT: GLAXO GROUP LIMITED
/ TITLE OF INVENTION: ASSAY
/ FILE REFERENCE: P80966 GCM
/ CURRENT APPLICATION NUMBER: US/10/466,391A
```

```
/ CURRENT FILING DATE: 2003-07-15
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: PatentIn version 3.0
/ SEQ ID NO 1
/ LENGTH: 2526
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: CDS
/ LOCATION: (454)..(1959)
US-10-466-391A-1
```

Alignment of: us-10-726-967a-1 x US-10-466-391A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
517 ACCCAGCAGCGGCATCCGGCTGCCCTCGCGCAGCGGCTGGGGGGCCCCC 566
38 OLeuGlyLeu
|||||
567 CCGGGGGCTG
|||||
576
```

Sequence name: rnpbp2ndb:US-09-969-671A-1

Sequence documentation:

```
/ Sequence 1, Application US/09969671A
/ Publication No. US20030036112A1
/ GENERAL INFORMATION:
/ APPLICANT: CHAPMAN, CONRAD G.
/ APPLICANT: MURPHY, KAY
/ APPLICANT: POWELL, DAVID J.
/ APPLICANT: SMITH, TRUDI S.
/ TITLE OF INVENTION: ASP2
/ FILE REFERENCE: GH-70368-D1
/ CURRENT APPLICATION NUMBER: US/09/969,671A
/ CURRENT FILING DATE: 2003-10-03
/ PRIOR APPLICATION NUMBER: UK 9701684.4
/ PRIOR FILING DATE: 1997-01-28
/ PRIOR APPLICATION NUMBER: 09/009,191
/ PRIOR FILING DATE: 1998-01-20
/ PRIOR APPLICATION NUMBER: 09/694,200
/ PRIOR FILING DATE: 2000-10-23
/ NUMBER OF SEQ ID NOS: 6
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 1
/ LENGTH: 2541
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: unknown
/ LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516)
/ LOCATION: (2520) (2522) (2525) (2529) (2539) (2540)
/ OTHER INFORMATION: wherein n can be represented by a, c, t, or g
US-09-969-671A-1
```

Alignment of: us-10-726-967a-1 x US-09-969-671A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment: Gaps: 0

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGACAGCGGCGTGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-308-365-1

Sequence documentation:
; Sequence 1, Application US/10308365
; Publication No. US20030109022A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/308,365
; CURRENT FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 1
; LENGTH: 2541
; TYPE: DNA
; ORGANISM: HOMO SAPIENS
; FEATURE: FEATURE: MISCELLANEOUS FEATURE
; NAME/KEY: UNSURE
; LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516) (2520)
; LOCATION: (2522) (2525) (2529) (2539) (2540)
; OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t
US-10-308-365-1

Alignment of: us-10-726-967a-1 x US-10-308-365-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGACAGCGGCGTGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-829-717-1

Sequence documentation:
; Sequence 1, Application US/10829717
; Publication No. US20050101556A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY

APPLICANT: POWELL, DAVID J.
APPLICANT: SMITH, TRUDI S.
TITLE OF INVENTION: ASP 2
FILE REFERENCE: GH-70368-2
CURRENT APPLICATION NUMBER: US/10/829,717
CURRENT FILING DATE: 2004-04-22
PRIOR APPLICATION NUMBER: US/10/308,365
PRIOR FILING DATE: 2002-12-03
PRIOR APPLICATION NUMBER: US/09/694,200
PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: UK 9701684.4
PRIOR FILING DATE: 1997-01-28
PRIOR APPLICATION NUMBER: 09/009,191
PRIOR FILING DATE: 1998-01-20
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 1
LENGTH: 2541
TYPE: DNA
ORGANISM: HOMO SAPIENS
FEATURE: FEATURE: MISCELLANEOUS FEATURE
NAME/KEY: UNSURE
LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516) (2520)
LOCATION: (2522) (2525) (2529) (2539) (2540)
OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t
US-10-829-717-1

Alignment of: us-10-726-967a-1 x US-10-829-717-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGACAGCGGCGTGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGGCTG 123

Sequence name: rnpb2ndb:US-09-796-264-1

Sequence documentation:
; Sequence 1, Application US/09796264
; Patent No. US20020049303A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: OMRP 179
; CURRENT APPLICATION NUMBER: US/09/796,264
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/604,608
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31

```
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 1
/ LENGTH: 3252
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-796-264-1
```

Alignment of: us-10-726-967a-1 x US-09-796-264-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	51.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			
Total Percent Identity:			100.00	

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
25 ACCCAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCCCC 74
|||||
38 oLeuGlyLeu 41
|||||
75 CCTGGGGCTG 84
```

Sequence name: rnpbp2ndb:US-09-845-226-1

Sequence documentation:

```
/ Sequence 1, Application US/09845226
/ Patent No. US20020115600A1
/ GENERAL INFORMATION:
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Hong, Lin
/ APPLICANT: Ghosh, Arun K.
/ TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
/ FILE REFERENCE: OMRF 182
/ CURRENT APPLICATION NUMBER: US/09/845,226
/ CURRENT FILING DATE: 2001-04-30
/ PRIOR APPLICATION NUMBER: 09/603,713
/ PRIOR FILING DATE: 2000-06-27
/ PRIOR APPLICATION NUMBER: 60/168,060
/ PRIOR FILING DATE: 1999-11-30
/ PRIOR APPLICATION NUMBER: 60/177,836
/ PRIOR FILING DATE: 2000-01-25
/ PRIOR APPLICATION NUMBER: 60/178,368
/ PRIOR FILING DATE: 2000-01-27
/ PRIOR APPLICATION NUMBER: 60/210,292
/ PRIOR FILING DATE: 2000-06-08
/ NUMBER OF SEQ ID NOS: 31
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 1
/ LENGTH: 3252
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-845-226-1
```

Alignment of: us-10-726-967a-1 x US-09-845-226-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	51.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			
Total Percent Identity:			100.00	

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
25 ACCCAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCCCC 74
|||||
```

```
38 oLeuGlyLeu 41
|||||
75 CCTGGGGCTG 84
```

Sequence name: rnpbp2ndb:US-09-795-903A-1

Sequence documentation:

```
/ Sequence 1, Application US/09795903A
/ Patent No. US20020164760A1
/ GENERAL INFORMATION:
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Ian, Xinli
/ APPLICANT: Koelsch, Gerald
/ TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
/ TITLE OF INVENTION: of Use Thereof
/ FILE REFERENCE: OMRF 179
/ CURRENT APPLICATION NUMBER: US/09/795,903A
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/604,608
/ PRIOR FILING DATE: 2000-06-27
/ PRIOR APPLICATION NUMBER: 60/168,060
/ PRIOR FILING DATE: 1999-11-30
/ PRIOR APPLICATION NUMBER: 60/177,836
/ PRIOR FILING DATE: 2000-01-25
/ PRIOR APPLICATION NUMBER: 60/178,368
/ PRIOR FILING DATE: 2000-01-27
/ PRIOR APPLICATION NUMBER: 60/210,292
/ PRIOR FILING DATE: 2000-06-08
/ NUMBER OF SEQ ID NOS: 31
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 1
/ LENGTH: 3252
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-795-903A-1
```

Alignment of: us-10-726-967a-1 x US-09-795-903A-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	51.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			
Total Percent Identity:			100.00	

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
25 ACCCAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGCCCC 74
|||||
38 oLeuGlyLeu 41
|||||
75 CCTGGGGCTG 84
```

Sequence name: rnpbp2ndb:US-10-032-818-1

Sequence documentation:

```
/ Sequence 1, Application US/10032818
/ Patent No. US20030092629A1
/ GENERAL INFORMATION:
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Koelsch, Gerald
/ APPLICANT: Ghosh, Arun K.
/ TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
/ FILE REFERENCE: 2932.1006-007
/ CURRENT APPLICATION NUMBER: US/10/032,818
/ CURRENT FILING DATE: 2001-12-28
/ PRIOR APPLICATION NUMBER: US 60/275,756
/ PRIOR FILING DATE: 2001-03-14
/ PRIOR APPLICATION NUMBER: US 60/258,705
```

;; PRIOR FILING DATE: 2000-12-28
;; NUMBER OF SEQ ID NOS: 83
;; SOFTWARE: FASTSEQ for Windows Version 4.0
;; SEQ ID NO 1
;; LENGTH: 3252
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-10-032-818-1

Alignment of: us-10-726-967a-1 x US-10-032-818-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	51.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
|||||
25 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCGGCCCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rnpb2ndb:US-10-820-953-1

Sequence documentation:

;; Sequence 1, Application US/10820953
;; Publication No. US20040167075A1
;; GENERAL INFORMATION:
;; APPLICANT: Tang, Jordan J. N.
;; APPLICANT: Ghosh, Arun K.
;; TITLE OR INVENTION: Inhibitors of Memapsin 2 and Use Thereof
;; FILE REFERENCE: OMRF 182
;; CURRENT APPLICATION NUMBER: US/10/820,953
;; PRIOR FILING DATE: 2004-04-08
;; PRIOR APPLICATION NUMBER: US/09/603,713
;; PRIOR FILING DATE: 2000-06-27
;; PRIOR APPLICATION NUMBER: 60/141,363
;; PRIOR FILING DATE: 1999-06-28
;; PRIOR APPLICATION NUMBER: 60/168,060
;; PRIOR FILING DATE: 1999-11-30
;; PRIOR APPLICATION NUMBER: 60/177,836
;; PRIOR FILING DATE: 2000-01-25
;; PRIOR APPLICATION NUMBER: 60/178,368
;; PRIOR FILING DATE: 2000-01-27
;; PRIOR APPLICATION NUMBER: 60/210,292
;; PRIOR FILING DATE: 2000-06-08
;; NUMBER OF SEQ ID NOS: 31
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 1
;; LENGTH: 3252
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-10-820-953-1

Alignment of: us-10-726-967a-1 x US-10-820-953-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	51.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
|||||
25 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCGGCCCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rnpb2ndb:US-10-773-754-1

Sequence documentation:

;; Sequence 1, Application US/10773754
;; Publication No. US20040220079A1
;; GENERAL INFORMATION:
;; APPLICANT: Koelsch, Gerald
;; APPLICANT: Tang, Jordan J. N.
;; APPLICANT: Ghosh, Arun K.
;; APPLICANT: The Board of Trustees of the University of Illinois
;; TITLE OR INVENTION: Inhibitors of Memapsin 2 and Use Thereof
;; FILE REFERENCE: 022266-000930US
;; CURRENT APPLICATION NUMBER: US/10/773,754
;; PRIOR FILING DATE: 2004-02-06
;; PRIOR APPLICATION NUMBER: US 60/141,363
;; PRIOR FILING DATE: 1999-06-28
;; PRIOR APPLICATION NUMBER: US 60/168,060
;; PRIOR FILING DATE: 1999-11-30
;; PRIOR APPLICATION NUMBER: US 60/177,836
;; PRIOR FILING DATE: 2000-01-25
;; PRIOR APPLICATION NUMBER: US 60/178,368
;; PRIOR FILING DATE: 2000-01-27
;; PRIOR APPLICATION NUMBER: US 60/210,292
;; PRIOR FILING DATE: 2000-06-08
;; PRIOR APPLICATION NUMBER: US 09/603,713
;; PRIOR FILING DATE: 2000-06-27
;; PRIOR APPLICATION NUMBER: US 09/845,226
;; PRIOR FILING DATE: 2001-04-30
;; NUMBER OF SEQ ID NOS: 39
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 1
;; LENGTH: 3252
;; TYPE: DNA
;; ORGANISM: Homo sapiens
;; FEATURE:
;; OTHER INFORMATION: memapsin 2
US-10-773-754-1

Alignment of: us-10-726-967a-1 x US-10-773-754-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	51.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
|||||
25 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCGGCCCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rnpb2ndb:US-10-721-693-21

Sequence documentation:

;; Sequence 21, Application US/10721693

```
Publication No. US2004016225A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 21
LENGTH: 5625
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5625)
OTHER INFORMATION: LOCUS BACE 5625 bp mRNA linear F
OTHER INFORMATION: RI 05-NOV-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscipt
OTHER INFORMATION: variant d, mRNA.
OTHER INFORMATION: accession NM_138973; VERSION NM_138973.1 GI:21040367
PUBLICATION INFORMATION:
DATABASE ENTRY DATE: 2002-11-05
RELEVANT RESIDUES: (1)..(5625)
US-10-721-693-21

Alignment of: us-10-726-967a-1 x US-10-721-693-21 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 53.5
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHleGlyIleArgLeuProLeuAlaGSerGlyLeuGlyAlaPr 38
|||||
510 ACCGAGCAAGGCAUCCGCGCCGCCGACGCGCGCGGCGGCGCC 559
38 oleuGlyLeu 41
|||||
560 CCUGGGGCGUG 569

Sequence name: rmpb2ndb:US-10-852-997-21

Sequence documentation:
; Sequence 21, Application US/10852997
; Publication No. US20040220132A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.02
CURRENT APPLICATION NUMBER: US/10/852,997
CURRENT FILING DATE: 2004-05-25
PRIOR APPLICATION NUMBER: 10/721,693
PRIOR FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PatentIn version 3.1
SEQ ID NO 21
LENGTH: 5625
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
```

```
NAME/KEY: misc_feature
LOCATION: (1)..(5625)
OTHER INFORMATION: LOCUS BACE 5625 bp mRNA linear P
OTHER INFORMATION: RI 05-NOV-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscipt
OTHER INFORMATION: variant d, mRNA.
OTHER INFORMATION: accession NM_138973; VERSION NM_138973.1 GI:21040367
PUBLICATION INFORMATION:
DATABASE ENTRY DATE: 2002-11-05
RELEVANT RESIDUES: (1)..(5625)
US-10-852-997-21

Alignment of: us-10-726-967a-1 x US-10-852-997-21 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 53.5
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHleGlyIleArgLeuProLeuAlaGSerGlyLeuGlyAlaPr 38
|||||
510 ACCGAGCAAGGCAUCCGCGCCGCCGACGCGCGCGGCGGCGCC 559
38 oleuGlyLeu 41
|||||
560 CCUGGGGCGUG 569

Sequence name: rmpb2ndb:US-10-721-693-20

Sequence documentation:
; Sequence 20, Application US/10721693
; Publication No. US2004016225A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
CURRENT FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 20
LENGTH: 5700
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5700)
OTHER INFORMATION: LOCUS BACE 5700 bp mRNA linear P
OTHER INFORMATION: RI 21-MAY-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscipt
OTHER INFORMATION: variant c, mRNA.
OTHER INFORMATION: accession NM_138971; VERSION NM_138971.1 GI:21040363
PUBLICATION INFORMATION:
DATABASE ENTRY DATE: 2002-05-21
RELEVANT RESIDUES: (1)..(5700)
US-10-721-693-20

Alignment of: us-10-726-967a-1 x US-10-721-693-20 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 53.6
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
```

Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
510 ACCGAGCAGCGCAUCCGGCCGCCCGCAGCGCGCCUGGGGGGCCCC 559
|||||
38 OLeuGlyLeu 41
|||||
560 CCUGGGGCGUG 569
```

Sequence name: rnpb2ndb:US-10-852-997-20

Sequence documentation:

```
; Sequence 20, Application US/10852997
; Publication No. US20040220132A1
; GENERAL INFORMATION:
; APPLICANT: Medtronic, Inc.
; APPLICANT: Medtronic, Inc.
; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
; TITLE OF INVENTION: siRNA
; FILE REFERENCE: P11089.02
; CURRENT APPLICATION NUMBER: US/10/852,997
; CURRENT FILING DATE: 2004-05-25
; PRIOR APPLICATION NUMBER: 10/721,693
; PRIOR FILING DATE: 2003-11-25
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 20
; LENGTH: 5700
; TYPE: RNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: (1)..(5700) BACE 5700 bp mRNA linear F
; OTHER INFORMATION: LOCUS
; OTHER INFORMATION: RI 21-MAY-2002
; OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
; OTHER INFORMATION: anscript
; OTHER INFORMATION: variant C, mRNA.
; OTHER INFORMATION: ACCESSION NM_138971; VERSION NM_138971.1 GI:21040363
; DATABASE ENTRY DATE: 2002-05-21
; DATABASE ENTRY DATE: 2002-05-21
; RELEVANT RESIDUES: (1)..(5700)
; US-10-852-997-20
```

Alignment of: us-10-726-967a-1 x US-10-852-997-20 ..

Alignment segment 1/1: (+)

Quality: 104.00 Total length: 53.6
Matching length: 20 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
510 ACCGAGCAGCGCAUCCGGCCGCCCGCAGCGCGCCUGGGGGGCCCC 559
|||||
38 OLeuGlyLeu 41
|||||
560 CCUGGGGCGUG 569
```

Sequence name: rnpb2ndb:US-10-721-693-19

Sequence documentation:
; Sequence 19, Application US/10721693
; Publication No. US20040162255A1
; GENERAL INFORMATION:
; APPLICANT: Medtronic, Inc.
; APPLICANT: Medtronic, Inc.
; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
; TITLE OF INVENTION: siRNA
; FILE REFERENCE: P11089.00
; CURRENT APPLICATION NUMBER: US/10/721,693
; CURRENT FILING DATE: 2003-11-25
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 19
; LENGTH: 5757
; TYPE: RNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: (1)..(5757) BACE 5757 bp mRNA linear P
; OTHER INFORMATION: LOCUS
; OTHER INFORMATION: RI 05-NOV-2002
; OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
; OTHER INFORMATION: anscript
; OTHER INFORMATION: variant b, mRNA.
; OTHER INFORMATION: ACCESSION NM_138972; VERSION NM_138972.1 GI:21040365
; DATABASE ENTRY DATE: 2002-11-05
; DATABASE ENTRY DATE: 2002-11-05
; RELEVANT RESIDUES: (1)..(5757)
; US-10-721-693-19

Alignment of: us-10-726-967a-1 x US-10-721-693-19 ..

Alignment segment 1/1: (+)

Quality: 104.00 Total length: 53.6
Matching length: 20 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
510 ACCGAGCAGCGCAUCCGGCCGCCCGCAGCGCGCCUGGGGGGCCCC 559
|||||
38 OLeuGlyLeu 41
|||||
560 CCUGGGGCGUG 569
```

Sequence name: rnpb2ndb:US-10-852-997-19

Sequence documentation:

```
; Sequence 19, Application US/10852997
; Publication No. US20040220132A1
; GENERAL INFORMATION:
; APPLICANT: Medtronic, Inc.
; APPLICANT: Medtronic, Inc.
; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
; TITLE OF INVENTION: siRNA
; FILE REFERENCE: P11089.02
; CURRENT APPLICATION NUMBER: US/10/852,997
; CURRENT FILING DATE: 2004-05-25
; PRIOR APPLICATION NUMBER: 10/721,693
; PRIOR FILING DATE: 2003-11-25
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 19
; LENGTH: 5757
```

```

; TYPE: RNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(5757)
; OTHER INFORMATION: LOCUS BACE 5757 bp mRNA linear F
; OTHER INFORMATION: RI 05-NOV-2002
; OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
; OTHER INFORMATION: Ancestor
; OTHER INFORMATION: variant b, mRNA
; OTHER INFORMATION: ACCESSION NM_138972; VERSION NM_138972.1 GI:21040365
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: NM_138972
; DATABASE ENTRY DATE: 2002-11-05
; RELEVANT RESIDUES: (1)..(5757)
US-10-852-997-19
```

Alignment of: us-10-726-967a-1 x US-10-852-997-19 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	20	Score:	53.6
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	0	Total Percent Identity:	100.00
Gaps:				

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
510 ACCGAGCAGCGCAUCCGCGCCGCCGCGCAGCGCGCGCGCGCGCC 559
38 oleuGlyLeu
|||||
560 CTUGGGGCGUG 569
```

Sequence name: rnpb2ndb:US-10-721-693-18

```

Sequence documentation:
; Sequence 18, Application US/10721693
; Publication No. US20040162255A1
; GENERAL INFORMATION:
; APPLICANT: Medtronic, Inc.
; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
; FILE REFERENCE: P11089.00
; CURRENT APPLICATION NUMBER: US/10/721,693
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 18
; LENGTH: 5832
; TYPE: RNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(5832)
; OTHER INFORMATION: LOCUS BACE 5832 bp mRNA linear PRI 05-NOV-2002
; OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
; OTHER INFORMATION: Ancestor
; OTHER INFORMATION: variant a, mRNA.
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: NM_012104
; DATABASE ENTRY DATE: 2002-11-05
; RELEVANT RESIDUES: (1)..(5832)
US-10-721-693-18
```

Alignment of: us-10-726-967a-1 x US-10-721-693-18 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	20	Score:	53.7
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	0	Total Percent Identity:	100.00
Gaps:				

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
510 ACCGAGCAGCGCAUCCGCGCCGCCGCGCAGCGCGCGCGCGCC 559
38 oleuGlyLeu
|||||
560 CTUGGGGCGUG 569
```

Sequence name: rnpb2ndb:US-10-852-997-18

```

Sequence documentation:
; Sequence 18, Application US/10852997
; Publication No. US20040220132A1
; GENERAL INFORMATION:
; APPLICANT: Medtronic, Inc.
; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
; FILE REFERENCE: P11089.02
; CURRENT APPLICATION NUMBER: US/10/852,997
; CURRENT FILING DATE: 2004-05-25
; PRIOR APPLICATION NUMBER: 10/721,693
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 18
; LENGTH: 5832
; TYPE: RNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(5832)
; OTHER INFORMATION: LOCUS BACE 5832 bp mRNA linear PRI 05-NOV-2002
; OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
; OTHER INFORMATION: Ancestor
; OTHER INFORMATION: variant a, mRNA.
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: NM_012104
; DATABASE ENTRY DATE: 2002-11-05
; RELEVANT RESIDUES: (1)..(5832)
US-10-852-997-18
```

Alignment of: us-10-726-967a-1 x US-10-852-997-18 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	20	Score:	53.7
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	0	Total Percent Identity:	100.00
Gaps:				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
510 ACCGACGACGGCAUCCGGCCUCCGCGACAGCGCCUGGGGGCGCCCC 559
38 OleuGlyLeu 41
|||||
560 CCTGGGGCTG 569

Sequence name: rnpb2ndb:US-10-723-860-5006

Sequence documentation:

; Sequence 5006, Application US/10723860
; Publication No. US20040253606A1
; GENERAL INFORMATION:
; APPLICANT: Aziz, Natasha
; APPLICANT: Ginsburg, Wendy M.
; APPLICANT: Zlotnik, Albert
; TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions &
; TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators
; FILE REFERENCE: 05882.0193.NPUS01
; CURRENT APPLICATION NUMBER: US/10/723,860
; CURRENT FILING DATE: 2003-11-26
; PRIOR APPLICATION NUMBER: 60/429,739
; PRIOR FILING DATE: 2002-11-26
; NUMBER OF SEQ ID NOS: 8393
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 5006
; LENGTH: 5876
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-723-860-5006

Alignment of: us-10-726-967a-1 x US-10-723-860-5006 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	53.7
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
518 ACCGACGACGGCATCCGGCTGCCCTGCGACAGCGCGCTGGGGGGCGCCCC 567
38 OleuGlyLeu 41
|||||
568 CCTGGGGCTG 577

Sequence name: rnpb2ndb:US-10-159-942-4

Sequence documentation:

; Sequence 4, Application US/10159942
; Publication No. US20030224512A1
; GENERAL INFORMATION:
; APPLICANT: Kenneth W. Dobie
; TITLE OF INVENTION: ANTISENSE MODULATION OF BETA-SITE APP-CLEAVING ENZYME EXPRESSION
; FILE REFERENCE: RTS-0383
; CURRENT APPLICATION NUMBER: US/10/159,942
; CURRENT FILING DATE: 2002-05-31
; NUMBER OF SEQ ID NOS: 133
; SEQ ID NO 4
; LENGTH: 5878
; TYPE: DNA
; ORGANISM: H. sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (455)...(1960)
US-10-159-942-4

Alignment of: us-10-726-967a-1 x US-10-159-942-4 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	53.7
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
518 ACCGACGACGGCATCCGGCTGCCCTGCGACAGCGCGCTGGGGGGCGCCCC 567
38 OleuGlyLeu 41
|||||
568 CCTGGGGCTG 577

Sequence name: rnpb2ndb:US-10-723-860-284

Sequence documentation:

; Sequence 284, Application US/10723860
; Publication No. US20040253606A1
; GENERAL INFORMATION:
; APPLICANT: Aziz, Natasha
; APPLICANT: Ginsburg, Wendy M.
; APPLICANT: Zlotnik, Albert
; TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions &
; TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators
; FILE REFERENCE: 05882.0193.NPUS01
; CURRENT APPLICATION NUMBER: US/10/723,860
; CURRENT FILING DATE: 2003-11-26
; PRIOR APPLICATION NUMBER: 60/429,739
; PRIOR FILING DATE: 2002-11-26
; NUMBER OF SEQ ID NOS: 8393
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 284
; LENGTH: 5878
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-723-860-284

Alignment of: us-10-726-967a-1 x US-10-723-860-284 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	53.7
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
518 ACCGACGACGGCATCCGGCTGCCCTGCGACAGCGCGCTGGGGGGCGCCCC 567
38 OleuGlyLeu 41
|||||
568 CCTGGGGCTG 577

Sequence name: rnpb2ndb:US-10-956-157-1778

Sequence documentation:

; Sequence 1778, Application US/10956157
; Publication No. US20050118625A1
; GENERAL INFORMATION:
; APPLICANT: Wyeth
; APPLICANT: Mount, William

;; TITLE OF INVENTION: NUCLEIC ACID ARRAYS FOR DETECTING GENE EXPRESSION ASSOCIATED WITH
;; FILE OF INVENTION: HUMAN OSTEOARTHRITIS AND HUMAN PROTEASES
;; FILE REFERENCE: 031896-043000 (AM 101081)
;; CURRENT APPLICATION NUMBER: US/10/956,157
;; CURRENT FILING DATE: 2004-10-04
;; NUMBER OF SEQ ID NOS: 319805
;; SOFTWARE: PatentIn version 3.2
;; SEQ ID NO 1778
;; LENGTH: 5878
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-10-956-157-1778

Alignment of: us-10-726-967a-1 x US-10-956-157-1778 ..

Alignment segment 1/1: (+)

Matching	Percent	Similarity:	100.00	Matching	Percent	Similarity:	100.00
Total	Percent	Similarity:	100.00	Total	Percent	Similarity:	100.00

Alignment:

22 ThrGlnHtGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
518 ACCGACACGCGATCCGGCTGCGCTCCGCGACGCGCGCGCGCGCC 567
38 OLeuGlyLeu 41
568 CCGGGGCGCTG 577

Sequence name: rnpb2ndb:US-09-794-927-7

Sequence documentation:

;; Sequence 7, Application US/09794927
;; Patent No. US20010016324A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrikson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Ridqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
;; TITLE OF INVENTION: USES
;; FILE REFERENCE: 28341/62808G
;; CURRENT APPLICATION NUMBER: US/09/794,927
;; CURRENT FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 7
;; LENGTH: 2043
;; TYPE: DNA
;; ORGANISM: Mus musculus
US-09-794-927-7

Alignment of: us-10-726-967a-1 x US-09-794-927-7 ..

Alignment segment 1/1: (+)

Quality: 77.00

Score: 121

Matching	Percent	Similarity:	90.00	Matching	Percent	Similarity:	80.00
Total	Percent	Similarity: <td>90.00</td> <td>Total</td> <td>Percent</td> <td>Similarity:<td>80.00</td></td>	90.00	Total	Percent	Similarity: <td>80.00</td>	80.00

Alignment:

22 ThrGlnHtGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGATCTCGGATCCGGCTGCGCTCCGCGACGCGCGCGCGCCACC 113
38 OLeuGlyLeu 41
114 CCGGGGCGCTG 123

Sequence name: rnpb2ndb:US-09-795-847-7

Sequence documentation:

;; Sequence 7, Application US/09795847
;; Patent No. US20010018208A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrikson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Ridqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
;; TITLE OF INVENTION: USES
;; FILE REFERENCE: 28341/62808G
;; CURRENT APPLICATION NUMBER: US/09/795,847
;; CURRENT FILING DATE: 2001-02-28
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 7
;; LENGTH: 2043
;; TYPE: DNA
;; ORGANISM: Mus musculus
US-09-795-847-7

Alignment of: us-10-726-967a-1 x US-09-795-847-7 ..

Alignment segment 1/1: (+)

Matching	Percent	Similarity:	90.00	Matching	Percent	Similarity:	80.00
Total	Percent	Similarity: <td>90.00</td> <td>Total</td> <td>Percent</td> <td>Similarity:<td>80.00</td></td>	90.00	Total	Percent	Similarity: <td>80.00</td>	80.00

Alignment:

22 ThrGlnHtGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGATCTCGGATCCGGCTGCGCTCCGCGACGCGCGCGCGCCACC 113
38 OLeuGlyLeu 41
114 CCGGGGCGCTG 123

Sequence name: rnpb2ndb:US-09-794-743-7

Sequence documentation:


```
; Sequence 7, Application US/09794743
; Patent No. US2001002131A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
; US-09-794-743-7
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Alignment of: us-10-726-967a-1 x US-09-794-743-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	121
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Identity:	90.00		80.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLar 38
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
64 ACCCATCTCGCATCGGCTGCCCTTCGACGGCGCTGGCAGGGCCACC 113
38 oleuGlyLeu
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
114 CTTGGGCGCTG
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
41
123
```

Sequence name: rnpb2ndb:US-09-794-748-7

```
; Sequence documentation:
; Sequence 7, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
```

```
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
; US-09-794-748-7
```

Alignment of: us-10-726-967a-1 x US-09-794-748-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	121
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Identity:	90.00		80.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLar 38
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
64 ACCCATCTCGCATCGGCTGCCCTTCGACGGCGCTGGCAGGGCCACC 113
38 oleuGlyLeu
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
114 CTTGGGCGCTG
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
41
123
```

Sequence name: rnpb2ndb:US-09-794-925-7

```
; Sequence documentation:
; Sequence 7, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
; US-09-794-925-7
```

Alignment of: us-10-726-967a-1 x US-09-794-925-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	121
--	----------	-------	--------	-----

Matching length: 20 Total length: 20
Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00
Total Percent Similarity: 90.00 Total Percent Identity: 80.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCGGCTGCCCTTCGACGCGCCTGGCAGGGCCACC 113
38 oLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnpbp2ndb:US-09-681-442-7

Sequence documentation:

/ Sequence 7, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ CURRENT FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-681-442-7

Alignment of: us-10-726-967a-1 x US-09-681-442-7 ..

Alignment segment 1/1: (+)

Quality: 77.00 Total length: 121
Matching length: 20 Matching Percent Identity: 80.00
Total Percent Similarity: 90.00 Total Percent Identity: 80.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCGGCTGCCCTTCGACGCGCCTGGCAGGGCCACC 113
38 oLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnpbp2ndb:US-09-869-414-7

Sequence documentation:

/ Sequence 7, Application US/09869414

/ Publication No. US20030077226A1

/ GENERAL INFORMATION:
/ APPLICANT: Bienkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ CURRENT FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-869-414-7

Alignment of: us-10-726-967a-1 x US-09-869-414-7 ..

Alignment segment 1/1: (+)

Quality: 77.00 Total length: 121
Matching length: 20 Matching Percent Identity: 80.00
Total Percent Similarity: 90.00 Total Percent Identity: 80.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCGGCTGCCCTTCGACGCGCCTGGCAGGGCCACC 113
38 oLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnpbp2ndb:US-09-548-366-7

Sequence documentation:

/ Sequence 7, Application US/09548366
/ Publication No. US20030104365A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES THEREFOR
/ FILE REFERENCE: 28341/6280A
/ CURRENT APPLICATION NUMBER: US/09/548,366
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7

LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-548-366-7

Alignment of: us-10-726-967a-1 x US-09-548-366-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCGGCTGCCCTTGCACAGCGGCTGCAGGGCCACC 113
|||
38 oleuGlyLeu 41
|||
114 CCTGGGCGCTG 123

Sequence name: rnpb2ndb:US-10-652-927-7

Sequence documentation:

Sequence 7, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
PRIOR FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-10-652-927-7

Alignment of: us-10-726-967a-1 x US-10-652-927-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCGGCTGCCCTTGCACAGCGGCTGCAGGGCCACC 113

38 oleuGlyLeu 41
|||||
114 CCTGGGCGCTG 123

Sequence name: rnpb2ndb:US-10-652-830-7

Sequence documentation:

Sequence 7, Application US/10652830
Publication No. US20040048303A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280N1
CURRENT APPLICATION NUMBER: US/10/652,830
PRIOR FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-10-652-830-7

Alignment of: us-10-726-967a-1 x US-10-652-830-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCGGCTGCCCTTGCACAGCGGCTGCAGGGCCACC 113
|||
38 oleuGlyLeu 41
|||
114 CCTGGGCGCTG 123

Sequence name: rnpb2ndb:US-10-652-045-7

Sequence documentation:

Sequence 7, Application US/10652045
Publication No. US2004016507A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280N2
CURRENT APPLICATION NUMBER: US/10/652,045
PRIOR FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493

```

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-652-045-7
```

Alignment of: us-10-726-967a-1 x US-10-652-045-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGCCACC 113
38 OleuGlyLeu
|||||
114 CCTGGGCGCTG
|||
123
```

Sequence name: rnpb2ndb:US-10-476-935-7

```

Sequence documentation:
; Sequence 7, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-476-935-7
```

Alignment of: us-10-726-967a-1 x US-10-476-935-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Similarity:	90.00	Total Percent Identity:	80.00

```

; Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGCCACC 113
38 OleuGlyLeu
|||||
114 CCTGGGCGCTG
|||
123
```

Sequence name: rnpb2ndb:US-10-940-867-7

Sequence documentation:

```

; Sequence 7, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; PRIOR FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-940-867-7
```

Alignment of: us-10-726-967a-1 x US-10-940-867-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGCCACC 113
38 OleuGlyLeu
|||||
114 CCTGGGCGCTG
|||
123
```

Sequence name: rnpb2ndb:US-10-477-076-7

Sequence documentation:

```

; Sequence 7, Application US/10477076
; Publication No. US2005008032A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
```

;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 7
;; LENGTH: 2043
;; TYPE: DNA
;; ORGANISM: Mus musculus
US-10-477-076-7

Alignment of: us-10-726-967a-1 x US-10-477-076-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnH1eGly11eArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGATCCGGCTGCGCCCTTGCACGGCGCTGCGAGGCGCACC 113
|||
38 OleuGlyLeu 41
|||
114 CCTGGGCGCTG 123

Sequence name: rnpb2ndb:US-09-917-800A-1665

Sequence documentation:

;; Sequence 1665, Application US/09917800A
;; Patent No. US20020119462A1
;; GENERAL INFORMATION:
;; APPLICANT: Mendrick, Donna
;; APPLICANT: Porter, Mark
;; APPLICANT: Johnson, Kory
;; APPLICANT: Castile, Arthur
;; APPLICANT: Elashoff, Michael
;; APPLICANT: Gene Logic, Inc.
;; TITLE OF INVENTION: Molecular Toxicology Modeling
;; FILE REFERENCE: 44921-5038-US
;; CURRENT APPLICATION NUMBER: US/09/917,800A
;; PRIOR FILING DATE: 2001-07-31
;; PRIOR APPLICATION NUMBER: US 60/222,040
;; PRIOR FILING DATE: 2000-07-31
;; PRIOR APPLICATION NUMBER: US 60/222,880
;; PRIOR FILING DATE: 2000-11-02
;; PRIOR APPLICATION NUMBER: US 60/290,029
;; PRIOR FILING DATE: 2001-05-11
;; PRIOR APPLICATION NUMBER: US 60/290,645
;; PRIOR FILING DATE: 2001-05-15
;; PRIOR APPLICATION NUMBER: US 60/292,336
;; PRIOR FILING DATE: 2001-05-22
;; PRIOR APPLICATION NUMBER: US 60/295,798
;; PRIOR FILING DATE: 2001-06-06
;; PRIOR APPLICATION NUMBER: US 60/297,457
;; PRIOR FILING DATE: 2001-06-13
;; PRIOR APPLICATION NUMBER: US 60/298,884
;; PRIOR FILING DATE: 2001-06-19
;; PRIOR APPLICATION NUMBER: US 60/303,459
;; PRIOR FILING DATE: 2001-07-09
;; NUMBER OF SEQ ID NOS: 1740
;; SOFTWARE: PatentIn Ver. 2.1

;; SEQ ID NO 1665
;; LENGTH: 2158
;; TYPE: DNA
;; ORGANISM: Rattus norvegicus
;; FEATURE:
;; OTHER INFORMATION: Genbank Accession No. US20020119462A1 NM_019204
US-09-917-800A-1665

Alignment of: us-10-726-967a-1 x US-09-917-800A-1665 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	122
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnH1eGly11eArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
491 ACCCATCTCGGATCCGACTGCGCCCTTGCACGGCGCTGCGAGGCGCACC 540
|||
38 OleuGlyLeu 41
|||
541 CCTGGGCGCTG 550

Sequence name: rnpb2ndb:US-10-721-693-22

Sequence documentation:

;; Sequence 22, Application US/10721693
;; Publication No. US20040162255A1
;; GENERAL INFORMATION:
;; APPLICANT: Medtronic, Inc.
;; APPLICANT: Kaemmerer, William F.
;; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
;; TITLE OF INVENTION: siRNA
;; FILE REFERENCE: P11089.00
;; CURRENT APPLICATION NUMBER: US/10/721,693
;; CURRENT FILING DATE: 2003-11-25
;; NUMBER OF SEQ ID NOS: 23
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 22
;; LENGTH: 3880
;; TYPE: RNA
;; ORGANISM: Mus musculus
;; FEATURE:
;; NAME/KEY: misc feature
;; LOCATION: (1)-(3880)
;; OTHER INFORMATION: LOCUS Bace 3880 bp mRNA linear R
;; OTHER INFORMATION: OD 07-JAN-2002
;; OTHER INFORMATION: DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace), mR
;; OTHER INFORMATION: NA.
;; OTHER INFORMATION: ACCESSION NM_011792; VERSION NM_011792.2 GI:6857758
;; PUBLICATION INFORMATION:
;; DATABASE ACCESSION NUMBER: NM_011792
;; DATABASE ENTRY DATE: 2002-01-07
;; RELEVANT RESIDUES: (1)..(3880)
US-10-721-693-22

Alignment of: us-10-726-967a-1 x US-10-721-693-22 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	127
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||:::|||||
491 ACCCAUCUCCGCAUCCGGCCUCCUCCGCAAGCGCCUCCGACAGGCCACC 540
38 cLeuGlyLeu 41
541 CCUGGGCCUG 550

Sequence name: rnpbp2ndb:US-10-852-997-22

Sequence documentation:

Sequence 22, Application US/10852997
Publication No. US20040220132a1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Delivery
FILE REFERENCE: P11089.02
CURRENT FILING DATE: 2004-05-25
PRIORITY FILING DATE: 2003-11-25
PRIORITY FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PatentIn version 3.1
SEQ ID NO: 22
LENGTH: 3880
TYPE: RNA
ORGANISM: Mus musculus
FEATURE:
NAME/KEY: misc feature
LOCATION: (1)..(3880)
OTHER INFORMATION: LOCUS Bacc 3880 bp mRNA linear
OTHER INFORMATION: DEFINITION Mus musculus beta-site APP cleaving enzyme (Bacc), m
OTHER INFORMATION: NA.
PUBLICATION INFORMATION: ACCESSION NM_011792; VERSION NM_011792.2 GI:6857758
DATABASE ACCESSION NUMBER: NM_011792
DATE OF ENTRY: 2002-01-07
RELEVANT RESIDUES: (1)..(3880)
US-10-852-997-22

Alignment of: us-10-726-967a-1 x US-10-852-997-22 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	127
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||:::|||||
491 ACCCAUCUCCGCAUCCGGCCUCCUCCGCAAGCGCCUCCGACAGGCCACC 540
38 cLeuGlyLeu 41
541 CCUGGGCCUG 550

Sequence name: rnpbp2ndb:US-10-764-420-2565

Sequence documentation:

Sequence 2565, Application US/10764420
Publication No. US20050084872A1
GENERAL INFORMATION:
APPLICANT: Lum, Pek Yee
APPLICANT: Tan, Yeejun
APPLICANT: Dai, Hongyue

TITLE OF INVENTION: Methods For Determining Whether An Agent Possesses A Defined Biological Activity
FILE REFERENCE: ROSAL22057
CURRENT APPLICATION NUMBER: US/10/764,420
CURRENT FILING DATE: 2004-01-23
PRIORITY FILING DATE: 2003-01-24
PRIORITY FILING DATE: 2003-05-30
PRIORITY FILING DATE: 2003-05-30
NUMBER OF SEQ ID NOS: 3683
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO: 2565
LENGTH: 3880
TYPE: DNA
ORGANISM: Mus musculus
US-10-764-420-2565

Alignment of: us-10-726-967a-1 x US-10-764-420-2565 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	127
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||:::|||||
491 ACCCAUCUCCGCAUCCGGCCUCCUCCGCAAGCGCCUCCGACAGGCCACC 540
38 cLeuGlyLeu 41
541 CCUGGGCCUG 550

Sequence name: rnpbp2ndb:US-10-466-258-1

Sequence documentation:

Sequence 1, Application US/10466258
Publication No. US20040132096A1
GENERAL INFORMATION:
APPLICANT: GLAXO GROUP LIMITED
TITLE OF INVENTION: ASSAY
FILE REFERENCE: P80966 GCM
CURRENT APPLICATION NUMBER: US/10/466,258
CURRENT FILING DATE: 2003-07-15
PRIORITY FILING DATE: 2003-07-15
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn version 3.0
SEQ ID NO: 1
LENGTH: 2526
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (454)..(1959)
US-10-466-258-1

Alignment of: us-10-726-967a-1 x US-10-466-258-1 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	341
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
|||:::|||||

Sequence 20, Application US/10721693
Publication No. US20040162255A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 20
LENGTH: 5700
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5700)
OTHER INFORMATION: LOCUS BACE 5700 bp mRNA linear F
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscript
OTHER INFORMATION: variant c, mRNA, NM_138971, VERSION NM_138971.1 GI:21040363
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: NM_138971.1
DATABASE ENTRY DATE: 2002-05-21
RELEVANT RESIDUES: (1)..(5700)
US-10-721-693-20

Alignment of: us-10-726-967a-1 x US-10-721-693-20 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	350
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y11eArgLeuProLeuArgSerGlyLeuG1yG1yAlaPro 38
230 GGGATCCGAGCCCGCTACATCGCACGGCGGCCAGCCT 189

Sequence name: rnpb2nrb:US-10-852-997-20

Sequence documentation:

Sequence 20, Application US/10852997
Publication No. US20040220132A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.02
CURRENT APPLICATION NUMBER: US/10/852,997
CURRENT FILING DATE: 2004-05-25
PRIOR FILING DATE: 2003-11-25
PRIOR APPLICATION NUMBER: 10/721,693
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PatentIn version 3.1
SEQ ID NO 20
LENGTH: 5700
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5700)
OTHER INFORMATION: LOCUS BACE 5700 bp mRNA linear F

OTHER INFORMATION: RI 21-MAY-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscript
OTHER INFORMATION: variant c, mRNA, NM_138971, VERSION NM_138971.1 GI:21040363
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: NM_138971.1
DATABASE ENTRY DATE: 2002-05-21
RELEVANT RESIDUES: (1)..(5700)
US-10-852-997-20

Alignment of: us-10-726-967a-1 x US-10-852-997-20 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	350
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y11eArgLeuProLeuArgSerGlyLeuG1yG1yAlaPro 38
230 GGGATCCGAGCCCGCTACATCGCACGGCGGCCAGCCT 189

Sequence name: rnpb2nrb:US-10-721-693-19

Sequence documentation:

Sequence 19, Application US/10721693
Publication No. US20040162255A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
CURRENT FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 19
LENGTH: 5757
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5757)
OTHER INFORMATION: LOCUS BACE 5757 bp mRNA linear P
OTHER INFORMATION: RI 05-NOV-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscript
OTHER INFORMATION: variant b, mRNA, NM_138972, VERSION NM_138972.1 GI:21040365
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: NM_138972
DATABASE ENTRY DATE: 2002-11-05
RELEVANT RESIDUES: (1)..(5757)
US-10-721-693-19

Alignment of: us-10-726-967a-1 x US-10-721-693-19 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	350
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

; SEQ ID NO 18

; DATABASE ACCESSION NUMBER: NM_012104

TITLE OF INVENTION: NUCLEIC ACID ARRAYS FOR DETECTING GENE EXPRESSION ASSOCIATED WITH
FILE REFERENCE: 031896-043000 (AM 101081)
CURRENT APPLICATION NUMBER: US/10/956,157

CURRENT FILING DATE: 2004-10-04
NUMBER OF SEQ ID NOS: 319805
SOFTWARE: PatentIn version 3.2
SEQ ID NO 1778
LENGTH: 5878

TYPE: DNA
ORGANISM: Homo sapiens
US-10-956-157-1778

Alignment of: us-10-726-967a-1 x US-10-956-157-1778 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	351
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GYIIEAGYLEUPROLEUARGSERGLYLEUGLYALAPRO 38
238 GGGATCCCGAGCCCTGTCACATCGCAGCGCGCGCCACCT 197

Sequence name: rnpb2ndb:US-09-917-800A-1665

Sequence documentation:

Sequence 1665, Application US/09917800A
Patent No. US20020119462A1

GENERAL INFORMATION:

APPLICANT: Mendrick, Donna

APPLICANT: Porter, Mark

APPLICANT: Johnson, Kory

APPLICANT: Caetle, Arthur

APPLICANT: Elashoff, Michael

APPLICANT: Gene Logic, Inc.

TITLE OF INVENTION: Molecular Toxicology Modeling

FILE REFERENCE: 44921-5038-US

CURRENT APPLICATION NUMBER: US/09/917,800A

CURRENT FILING DATE: 2001-07-31

PRIOR APPLICATION NUMBER: US 60/222,040

PRIOR FILING DATE: 2000-07-31

PRIOR APPLICATION NUMBER: US 60/222,880

PRIOR FILING DATE: 2000-11-02

PRIOR APPLICATION NUMBER: US 60/290,029

PRIOR FILING DATE: 2001-05-11

PRIOR APPLICATION NUMBER: US 60/290,645

PRIOR FILING DATE: 2001-05-15

PRIOR APPLICATION NUMBER: US 60/292,336

PRIOR FILING DATE: 2001-05-22

PRIOR APPLICATION NUMBER: US 60/295,798

PRIOR FILING DATE: 2001-06-06

PRIOR APPLICATION NUMBER: US 60/297,457

PRIOR FILING DATE: 2001-06-13

PRIOR APPLICATION NUMBER: US 60/298,884

PRIOR FILING DATE: 2001-06-19

PRIOR APPLICATION NUMBER: US 60/303,459

PRIOR FILING DATE: 2001-07-09

NUMBER OF SEQ ID NOS: 1740

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 1665

LENGTH: 2158

TYPE: DNA

ORGANISM: Rattus norvegicus

FEATURE:

OTHER INFORMATION: Genbank Accession No. US20020119462A1 NM_019204

US-09-917-800A-1665

Alignment of: us-10-726-967a-1 x US-09-917-800A-1665 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	349
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

23 GINHIGLYIIEAGYLEUPROLEUARGSERGLYLEUGLY 36
182 CAGCGGGGAGATCGGCGCCCTGTGCGGCTGGAGGCGCGG 141

Sequence name: rnpb2ndb:US-10-721-693-22

Sequence documentation:

Sequence 22, Application US/10721693

Publication No. US20040162255A1

GENERAL INFORMATION:

APPLICANT: Medtronic, Inc.

APPLICANT: Kaemmerer, William F.

TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv

FILE REFERENCE: P11069.00

CURRENT APPLICATION NUMBER: US/10/721,693

CURRENT FILING DATE: 2003-11-25

NUMBER OF SEQ ID NOS: 23

SOFTWARE: PatentIn version 3.1

SEQ ID NO 22

LENGTH: 3880

TYPE: RNA

ORGANISM: Mus musculus

FEATURE:

NAME/KEY: misc.feature

LOCATION: (1)..(3880)

OTHER INFORMATION: LOCUS

OTHER INFORMATION: OD 07-JAN-2002

OTHER INFORMATION: DEFINITION

OTHER INFORMATION: Mus musculus beta-site APP cleaving enzyme (Bace), mR

OTHER INFORMATION: NA.

OTHER INFORMATION: ACCESSION

PUBLICATION INFORMATION: NM_011792; VERSION

DATABASE ACCESSION NUMBER: NM_011792

DATABASE ENTRY DATE: 2002-01-07

RELEVANT RESIDUES: (1)..(3880)

US-10-721-693-22

Alignment of: us-10-726-967a-1 x US-10-721-693-22 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	355
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

23 GINHIGLYIIEAGYLEUPROLEUARGSERGLYLEUGLY 36
182 CAGCGGGGAGATCGGCGCCCTGTGCGGCTGGAGGCGCGG 141

Sequence name: rnpb2ndb:US-10-852-997-22

Sequence documentation:

Sequence 22, Application US/10852997

Publication No. US20040220132A1

GENERAL INFORMATION:

APPLICANT: Medtronic, Inc.

APPLICANT: Medtronic, Inc.

```

; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
; FILE REFERENCE: P11089.02
; CURRENT APPLICATION NUMBER: US/10/852,997
; PRIOR FILING DATE: 2004-05-25
; PRIOR APPLICATION NUMBER: 10/721,693
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 22
; LENGTH: 3880
; TYPE: RNA
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(3880)
; OTHER INFORMATION: LOCUS
; OTHER INFORMATION: OD 07-JAN-2002
; OTHER INFORMATION: DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace), m
; OTHER INFORMATION: NM_011792, VERSION NM_011792.2 GI:6857758
; OTHER INFORMATION: ACCESSION NM_011792
; DATABASE ACCESSION NUMBER: NM_011792
; DATABASE ENTRY DATE: 2002-01-07
; RELEVANT RESIDUES: (1)..(3880)
US-10-852-997-22

Alignment of: us-10-726-967a-1 x US-10-852-997-22 ..
Alignment segment 1/1: (-)
      Matching Length: 33.00      Bscore: 355
      Matching Percent Similarity: 64.29      Matching Percent Identity: 50.00
      Total Percent Similarity: 64.29      Total Percent Identity: 50.00
      Gaps: 0

Alignment:
23 GlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyGly 36
182 CAGCGGGGGGATCGGGCCCTTGCGGGCTGGAAGGGCGCGG 141

Sequence name: rmpbp2nbp:US-10-764-420-2565

Sequence documentation:
; Sequence 2565, Application US/10764420
; Publication No. US20050084872A1
; GENERAL INFORMATION:
; APPLICANT: Lum, Pek Yee
; APPLICANT: Tan, Yejun
; APPLICANT: Dai, Hongyue
; TITLE OF INVENTION: Methods For Determining Whether An Agent
; FILE REFERENCE: ROSA12057
; CURRENT APPLICATION NUMBER: US/10/764,420
; PRIOR FILING DATE: 2004-01-23
; PRIOR APPLICATION NUMBER: US 60/442,797
; PRIOR FILING DATE: 2003-01-24
; PRIOR APPLICATION NUMBER: US 60/474,413
; PRIOR FILING DATE: 2003-05-30
; NUMBER OF SEQ ID NOS: 3683
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2565
; LENGTH: 3880
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-764-420-2565

Alignment of: us-10-726-967a-1 x US-10-764-420-2565 ..
Alignment segment 1/1: (-)
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      Matching Length: 33.00      Bscore: 355
      Matching Percent Similarity: 64.29      Matching Percent Identity: 50.00
      Total Percent Similarity: 64.29      Total Percent Identity: 50.00
      Gaps: 0

Alignment:
23 GlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyGly 36
182 CAGCGGGGGGATCGGGCCCTTGCGGGCTGGAAGGGCGCGG 141

Sequence name: rmpbp2nbp:US-09-794-927-50

Sequence documentation:
; Sequence 50, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Yan, Ridglang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-794-927-50

Alignment of: us-10-726-967a-1 x US-09-794-927-50 ..
Alignment segment 1/1: (-)
      Matching Length: 32.00      Bscore: 347
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
179 AAGCTGCCCTCCGGCCGGGCTCTCGGGCTCT 147

Sequence name: rmpbp2nbp:US-09-795-847-50

Sequence documentation:
; Sequence 50, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
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/ SEQ ID NO 50
/ LENGTH: 1287
/ TYPE: DNA
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-10-652-830-50
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Alignment of: us-10-726-967a-1 x US-10-652-830-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 147
```

Sequence name: rnpbp2ndb:US-10-652-045-50

Sequence documentation:

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/ Sequence 50, Application US/10652045
/ Publication No. US20040166507A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N2
/ CURRENT APPLICATION NUMBER: US/10/652,045
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 50
/ LENGTH: 1287
/ TYPE: DNA
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-10-652-045-50
```

Alignment of: us-10-726-967a-1 x US-10-652-045-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 147
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Sequence name: rnpbp2ndb:US-10-476-935-50

Sequence documentation:

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/ Sequence 50, Application US/10476935
/ Publication No. US20040234976A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M1
/ CURRENT APPLICATION NUMBER: US/10/476,935
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 50
/ LENGTH: 1287
/ TYPE: DNA
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-10-476-935-50
```

Alignment of: us-10-726-967a-1 x US-10-476-935-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 147
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Sequence name: rnpbp2ndb:US-10-477-076-50

Sequence documentation:

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/ Sequence 50, Application US/10477076
/ Publication No. US20050080232A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M2
/ CURRENT APPLICATION NUMBER: US/10/477,076
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
```


SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-10-477-076-50

Alignment of: us-10-726-967a-1 x US-10-477-076-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AGCTGCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-794-927-25

Sequence documentation:

; Sequence 25, Application US/09794927
; Patent NO. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927-25

Alignment of: us-10-726-967a-1 x US-09-794-927-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
119 AGCTGCCCTCCGGCGGCTCTCGGCTCT

37
87

Sequence name: rnpb2ndb:US-09-795-847-25

Sequence documentation:

; Sequence 25, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-25

Alignment of: us-10-726-967a-1 x US-09-795-847-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
119 AGCTGCCCTCCGGCGGCTCTCGGCTCT

37
87

Sequence name: rnpb2ndb:US-09-794-743-25

Sequence documentation:

; Sequence 25, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901

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; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-25
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Alignment of: us-10-726-967a-1 x US-09-794-743-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 87
```

Sequence name: rnpb2ndb:US-09-794-748-25

Sequence documentation:

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; Sequence 25, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62801I.
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-25
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Alignment of: us-10-726-967a-1 x US-09-794-748-25 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 348

Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 87
```

Sequence name: rnpb2ndb:US-09-794-925-25

Sequence documentation:

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; Sequence 25, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/62801I
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-25
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Alignment of: us-10-726-967a-1 x US-09-794-925-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 87
```

Sequence name: rnpb2ndb:US-09-681-442-25

Sequence documentation:

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; Sequence 25, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
US-09-794-748-25
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; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-25
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Alignment of: us-10-726-967a-1 x US-10-652-927-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT      87
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Sequence name: rnpbp2ndb:US-10-652-830-25

Sequence documentation:

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; Sequence 25, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-25
```

Alignment of: us-10-726-967a-1 x US-10-652-830-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT      87
```

Sequence name: rnpbp2ndb:US-10-652-045-25

Sequence documentation:

```

; Sequence 25, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-25
```

Alignment of: us-10-726-967a-1 x US-10-652-045-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT      87
```

Sequence name: rnpbp2ndb:US-10-476-935-25

Sequence documentation:

```

; Sequence 25, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
```

```

: PRIOR APPLICATION NUMBER:09/404,133
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: PCT/US99/20883
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: 06/101,594
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 73
: SOFTWARE: PatentIn Ver. 2.0
: SEQ ID NO 25
: LENGTH: 1302
: TYPE: DNA
: ORGANISM: Homo sapiens
US-10-476-935-25

```

Alignment of: us-10-726-967a-1 x US-10-476-935-25 .
Alignment segment 1/1: (-)

Quality:	32.00	Escape:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTCCCTCCGCGCCGCTCTCTCGAGCTCT 87

```

Sequence name: rnpbp2ndb:US-10-940-867-25

```

Sequence documentation:
: Sequence 25, Application US/10940867
: Publication No. US2005002626A1
: GENERAL INFORMATION:
: APPLICANT: Gurney, Mark E.
: APPLICANT: Bienkowski, Michael J.
: APPLICANT: Heinrichson, Robert L.
: APPLICANT: Parodi, Luis A.
: APPLICANT: Yan, Riqiang
: APPLICANT: Pharmacia & Upjohn Company
: TITLE OF INVENTION: Alzheimer's Disease Secretase
: FILE REFERENCE: 6177.PCPA
: CURRENT APPLICATION NUMBER: US/10/940,867
: CURRENT FILING DATE: 2004-09-14
: PRIOR APPLICATION NUMBER: US 09/806,194
: PRIOR FILING DATE: 2001-03-26
: PRIOR APPLICATION NUMBER: US 60/101,594
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 49
: SOFTWARE: PatentIn Ver. 2.0
: SEQ ID NO 25
: LENGTH: 1302
: TYPE: DNA
: ORGANISM: Homo sapiens
: US-10-940-867-25

```

Alignment of: us-10-726-967a-1 x US-10-940-867-25 . .

Alignment segment 1/1: (-)			
	Quality:	32.00	Escore: 348
Matching length:	11		Total length: 11
Matching Percent Similarity:	81.82		Matching Percent Identity: 54.55
Total Percent Similarity:	81.82		Total Percent Identity: 54.55
Gaps:	0		

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyGlyAla	37
119	AAAGTCACCCCTCGGCGGAGCTCTCTCGGGCTCT	87

Sequence name: rnpbp2ndb:US-10-477-076-25

```

Sequence documentation:
Sequence 25, Application US/10/477076
Publication No. US20050080232a1
GENERAL INFORMATION:
APPLICANT: Belkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-10-477-076-25

```

Alignment of: us-10-726-967a-1 x US-10-477-076-25 . .

Alignment segment 1/1: (-)	Quality: 32.00	Score: 348
	Matching length: 11	Total length: 11
	Matching Percent Similarity: 81.82	Matching Percent Identity: 54.55
	Total Similarity: 81.82	Total Percent Identity: 54.55
	Gaps: 0	

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyAla	37
119	AAcGTCCTCCGCGGCACTCTCGGACTCT	87

Sequence name: rnpbp2ndb:US-09-794-927-52

Sequence documentation:
Sequence 52, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Ridgand
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/5280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20861
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-09-794-927-52

Alignment of: us-10-726-967a-1 x US-09-794-927-52 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGTCGCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-09-795-847-52

Sequence documentation:

Sequence 52, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Ridiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-09-795-847-52

Alignment of: us-10-726-967a-1 x US-09-795-847-52 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity: 81.82
Gaps: 0
Total Percent Identity: 54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGTCGCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-09-794-743-52

Sequence documentation:

Sequence 52, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Ridiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-09-794-743-52

Alignment of: us-10-726-967a-1 x US-09-794-743-52 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGTCGCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-09-794-748-52

Sequence documentation:

Sequence 52, Application US/09794748
Patent No. US20020037315A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.

```
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280JL
CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-748-52

Alignment of: us-10-726-967a-1 x US-09-794-748-52 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Becore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rnpb2ndb:US-09-794-925-52

Sequence documentation:
; Sequence 52, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
; OTHER INFORMATION: delta TM
US-09-681-442-52

Alignment of: us-10-726-967a-1 x US-09-681-442-52 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Becore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rnpb2ndb:US-09-681-442-52

Sequence documentation:
; Sequence 52, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280RG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
; OTHER INFORMATION: delta TM
US-09-681-442-52

Alignment of: us-10-726-967a-1 x US-09-681-442-52 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Becore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

```
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-925-52

Alignment of: us-10-726-967a-1 x US-09-794-925-52 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Becore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rnpb2ndb:US-09-681-442-52

Sequence documentation:
; Sequence 52, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280RG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
; OTHER INFORMATION: delta TM
US-09-681-442-52

Alignment of: us-10-726-967a-1 x US-09-681-442-52 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Becore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-869-414-52

Sequence documentation:

Sequence 52, Application US/09869414
Publication No. US20030077226A1

GENERAL INFORMATION:

APPLICANT: Beinowski et al.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280M

CURRENT APPLICATION NUMBER: US/09/869,414

PRIOR FILING DATE: 2001-06-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)

US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-548-366-52

Sequence documentation:

Sequence 52, Application US/09548366

Publication No. US20030104365A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Beinowski, Michael J.

APPLICANT: Heintikson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

FILE REFERENCE: 28341/6280A

CURRENT APPLICATION NUMBER: US/09/548,366

PRIOR FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)

US-09-548-366-52

Alignment of: us-10-726-967a-1 x US-09-548-366-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-652-927-52

Sequence documentation:

Sequence 52, Application US/10652927

Publication No. US20040043408A1

GENERAL INFORMATION:

APPLICANT: Gurney et al.

TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

FILE REFERENCE: 29915/6280N3

CURRENT APPLICATION NUMBER: US/10/652,927

PRIOR FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: 09/794,925

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Hu-Asp2(b) delta TM

US-10-652-927-52

Alignment of: us-10-726-967a-1 x US-10-652-927-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-652-830-52

Sequence documentation:

; Sequence 52, Application US/10652830
; Publication No. US20040048303A1

; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280N1

; CURRENT APPLICATION NUMBER: US/10/652,830

; PRIOR FILING DATE: 2003-08-29

; PRIOR APPLICATION NUMBER: 09/794,925

; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE: OTHER INFORMATION: Hu-Asp2(b) delta TM

; US-10-652-830-52

Alignment of: us-10-726-967a-1 x US-10-652-830-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-652-045-52

Sequence documentation:

; Sequence 52, Application US/10652045
; Publication No. US20040166507A1

; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280N2

; CURRENT APPLICATION NUMBER: US/10/652,045

; PRIOR FILING DATE: 2003-08-29

; PRIOR APPLICATION NUMBER: 09/794,925

; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE: OTHER INFORMATION: Hu-Asp2(b) delta TM

; US-10-652-045-52

Alignment of: us-10-726-967a-1 x US-10-652-045-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-476-935-52

Sequence documentation:

; Sequence 52, Application US/10476935
; Publication No. US20040234976A1

; GENERAL INFORMATION:

; APPLICANT: Beinowski et al.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

; FILE REFERENCE: 28341/6280M1

; CURRENT APPLICATION NUMBER: US/10/476,935

; PRIOR FILING DATE: 2003-11-06

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)

; OTHER INFORMATION: delta TM

; US-10-476-935-52

Alignment of: us-10-726-967a-1 x US-10-476-935-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
--	----------	-------	--	--------	-----

Matching length: 11 Total length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-477-076-52

Sequence documentation:

Sequence 52, Application US/10477076
Publication No. US2005008032A1
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-App2(b)
US-10-477-076-52

Alignment of: us-10-726-967a-1 x US-10-477-076-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-794-927-21

Sequence documentation:

Sequence 21, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-21

Alignment of: us-10-726-967a-1 x US-09-794-927-21 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
158 AAGCTGCCCCCTCCGGCGGCTCTCTCGGCTCT

37
126

Sequence name: rnpb2ndb:US-09-795-847-21

Sequence documentation:

Sequence 21, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-21

Alignment of: us-10-726-967a-1 x US-09-795-847-21 ..
Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
158 MAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-09-794-743-21

Sequence documentation:
; Sequence 21, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-21

Alignment of: us-10-726-967a-1 x US-09-794-743-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
158 MAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-09-794-748-21

Sequence documentation:
; Sequence 21, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BL
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-21

Alignment of: us-10-726-967a-1 x US-09-794-748-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
158 MAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-09-794-925-21

Sequence documentation:
; Sequence 21, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0

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; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-21
```

Alignment of: us-10-726-967a-1 x US-09-794-925-21 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	348
Matching length:	11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55
Total Percent Similarity:	81.82		Total Percent Identity:	54.55
Gaps:	0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||:::
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT
```

Sequence name: rnpb2ndb:US-09-681-442-21

Sequence documentation:

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; Sequence 21, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OR INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280Fg
; CURRENT APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-21
```

Alignment of: us-10-726-967a-1 x US-09-681-442-21 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	348
Matching length:	11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55
Total Percent Similarity:	81.82		Total Percent Identity:	54.55
Gaps:	0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||:::
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT
```

Sequence name: rnpb2ndb:US-09-869-414-21

Sequence documentation:

```

; Sequence 21, Application US/0969414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski, et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OR INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-21
```

Alignment of: us-10-726-967a-1 x US-09-869-414-21 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	348
Matching length:	11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55
Total Percent Similarity:	81.82		Total Percent Identity:	54.55
Gaps:	0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||:::
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT
```

Sequence name: rnpb2ndb:US-09-548-366-21

Sequence documentation:

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; Sequence 21, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OR INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
```

TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366-21

Alignment of: us-10-726-967a-1 x US-09-548-366-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
158 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-10-652-927-21

Sequence documentation:

Sequence 21, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:

APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
PRIOR FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-927-21

Alignment of: us-10-726-967a-1 x US-10-652-927-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
158 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-10-652-830-21

Sequence documentation:

Sequence 21, Application US/10652830
Publication No. US20040048303A1

GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N1
CURRENT APPLICATION NUMBER: US/10/652,830
PRIOR FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-830-21

Alignment of: us-10-726-967a-1 x US-10-652-830-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
158 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-10-652-045-21

Sequence documentation:

Sequence 21, Application US/10652045
Publication No. US20040166507A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N2
CURRENT APPLICATION NUMBER: US/10/652,045
PRIOR FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens

US-10-652-045-21

Alignment of: us-10-726-967a-1 x US-10-652-045-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||:::
158 AAGCTGCCCCCTCCGGCCGGGCTCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-10-476-935-21

Sequence documentation:

Publication No. US20040234976A1
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M1
CURRENT APPLICATION NUMBER: US/10/476,935
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-10-476-935-21

Alignment of: us-10-726-967a-1 x US-10-476-935-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||:::
158 AAGCTGCCCCCTCCGGCCGGGCTCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-10-940-867-21

Sequence documentation:

Sequence 21, Application US/10940867
Publication No. US2005026256A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Van, Riqiang

APPLICANT: Pharmacia & Upjohn Company

TITLE OF INVENTION: Alzheimer's Disease Secretase

FILE REFERENCE: 6177.PCPA

CURRENT APPLICATION NUMBER: US/10/940,867

CURRENT FILING DATE: 2004-09-14

PRIOR APPLICATION NUMBER: US 09/806,194

PRIOR FILING DATE: 2001-03-26

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 49

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 21

LENGTH: 1341

TYPE: DNA

ORGANISM: Homo sapiens

US-10-940-867-21

Alignment of: us-10-726-967a-1 x US-10-940-867-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||:::
158 AAGCTGCCCCCTCCGGCCGGGCTCTCTCGGGCTCT

37
126

Sequence name: rnpb2ndb:US-10-477-076-21

Sequence documentation:

Sequence 21, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-10-477-076-21

Alignment of: us-10-726-967a-1 x US-10-477-076-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||
158 AGCTGCCCCCTCCGGCGGGCTCTCGGCTCT

37
126

Sequence name: rnpb2ndb:US-09-794-927-29

Sequence documentation:

Sequence 29, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280FG
CURRENT FILING DATE: 2001-02-27
CURRENT APPLICATION NUMBER: US/09/794,927
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-29

Alignment of: us-10-726-967a-1 x US-09-794-927-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||
179 AGCTGCCCCCTCCGGCGGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-795-847-29

Sequence documentation:

Sequence 29, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-29

Alignment of: us-10-726-967a-1 x US-09-795-847-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||
179 AGCTGCCCCCTCCGGCGGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-794-743-29

Sequence documentation:

Sequence 29, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
CURRENT APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-743-29

Alignment of: us-10-726-967a-1 x US-09-794-743-29 ..

TYPE: DNA
ORGANISM: Homo sapiens
US-09-681-442-29

Alignment of: us-10-726-967a-1 x US-09-681-442-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-09-869-414-29

Sequence documentation:

Sequence 29, Application US/09869414
Publication No. US20030077226A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-29

Alignment of: us-10-726-967a-1 x US-09-869-414-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-09-548-366-29

Sequence documentation:

Sequence 29, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.

Alignment of: us-10-726-967a-1 x US-09-548-366-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-10-652-927-29

Sequence documentation:

Sequence 29, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 28915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-927-29

Alignment segment 1/1: (-)

Sequence documentation:
; Sequence 7, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Manpin
; APPLICANT: Hong, Lin
; APPLICANT: Koelsch, Gerald E.
; APPLICANT: Loy, Jeffrey A.
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasudrum, Thipseywamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; TITLE OF INVENTION: ACTIVITY AND METHODS OF USE THEREOF
; FILE REFERENCE: 2932.1001-004
; CURRENT FILING DATE: US/10/281,092
; PRIOR APPLICATION NUMBER: 2002-10-23
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 1371
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: promemapsin 2-r1
US-10-281-092-7

Alignment of: us-10-726-967a-1 x US-10-281-092-7 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:
Matching length:	11		348	
Matching Percent Similarity:	81.82		11	
Total Percent Similarity:	81.82		54.55	
Gaps:	0		54.55	
Total Percent Identity:			54.55	

Alignment:

```
27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|::|
185 AAGCTGCCCTCCGCGCGGCTCTCCGCGGCTCT      153
```

Sequence name: rnpb2ndb:US-09-794-927-23

Sequence documentation:
; Sequence 23, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentln Ver. 2.0
US-09-794-927-23

Alignment of: us-10-726-967a-1 x US-09-794-927-23 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:
Matching length:	11		348	
Matching Percent Similarity:	81.82		11	
Total Percent Similarity:	81.82		54.55	
Gaps:	0		54.55	
Total Percent Identity:			54.55	

Alignment:

```
27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
197 AAGCTGCCCTCCGCGCGGCTCTCCGCGGCTCT      165
```

Sequence name: rnpb2ndb:US-09-794-927-31

Sequence documentation:
; Sequence 31, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentln Ver. 2.0

SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-31

Alignment of: us-10-726-967a-1 x US-09-794-927-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
179 AGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-795-847-23

Sequence documentation:

Sequence 23, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-23

Alignment of: us-10-726-967a-1 x US-09-795-847-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
197 AGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

37
165

Sequence name: rnpb2ndb:US-09-795-847-31

Sequence documentation:

Sequence 31, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280DE
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-31

Alignment of: us-10-726-967a-1 x US-09-795-847-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
179 AGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-794-743-23

Sequence documentation:

Sequence 23, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133

```

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-23

Alignment of: us-10-726-967a-1 x US-09-794-743-23 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||:::|||||:::
197 AAGCTGCCCCCTCCGGCGGCGCTCCTCGGCGCTCT

Sequence name: rnpbp2ndb:US-09-794-743-31

Sequence documentation:
; Sequence 31, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-31

Alignment of: us-10-726-967a-1 x US-09-794-743-31 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
Total Percent Similarity: 81.82      Total Percent Identity: 54.55
Gaps: 0
```

```

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGGCGGCGCTCCTCGGCGCTCT

Sequence name: rnpbp2ndb:US-09-794-748-23

Sequence documentation:
; Sequence 23, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-23

Alignment of: us-10-726-967a-1 x US-09-794-748-23 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||:::|||||:::
197 AAGCTGCCCCCTCCGGCGGCGCTCCTCGGCGCTCT

Sequence name: rnpbp2ndb:US-09-794-748-31

Sequence documentation:
; Sequence 31, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280JL
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CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-748-31

Alignment of: us-10-726-967a-1 x US-09-794-748-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGCCGCCGCTCTCGGCTCT

37
147

Sequence name: rnbp2ndb:US-09-794-925-23

Sequence documentation:

Sequence 23, Application US/09794925
Patent No. US20020064819A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280H1
CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925-23

Alignment of: us-10-726-967a-1 x US-09-794-925-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGCCGCCGCTCTCGGCTCT

37
165

Sequence name: rnbp2ndb:US-09-794-925-31

Sequence documentation:

Sequence 31, Application US/09794925
Patent No. US20020064819A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280H1
CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925-31

Alignment of: us-10-726-967a-1 x US-09-794-925-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGCCGCCGCTCTCGGCTCT

37
147

Sequence name: rnbp2ndb:US-09-681-442-23

Sequence documentation:

Sequence 23, Application US/09681442
Patent No. US20020081634A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.

```

; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280FG
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-23

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Alignment of: us-10-726-967a-1 x US-09-681-442-23 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching Length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
197 AAGTGTCCCTCCGGCCGGGCTCTCGGCTCT 165

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Sequence name: rnpbp2ndb:US-09-681-442-31

Sequence documentation:

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; Sequence 31, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-31

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Alignment of: us-10-726-967a-1 x US-09-681-442-31 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching Length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGTGTCCCTCCGGCCGGGCTCTCGGCTCT 147

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Sequence name: rnpbp2ndb:US-09-869-414-23

Sequence documentation:

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; Sequence 23, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-23

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Alignment of: us-10-726-967a-1 x US-09-869-414-23 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching Length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
197 AAGTGTCCCTCCGGCCGGGCTCTCGGCTCT 165

```

Sequence name: rnpbp2ndb:US-09-869-414-31

Sequence documentation:

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; Sequence 31, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M

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CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-31

Alignment of: us-10-726-967a-1 x US-09-869-414-31 ..

Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total length: 11
Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCTCCGCGCTCT

37
147

Sequence name: rmpb2ndb:US-09-548-366-23

Sequence documentation:

Sequence 23, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366-23

Alignment of: us-10-726-967a-1 x US-09-548-366-23 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 348

Matching length: 11
Matching Percent Similarity: 81.82
Total length: 11
Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
197 AAGCTGCCCCCTCCGGCGGCTCTCCGCGCTCT

37
165

Sequence name: rmpb2ndb:US-09-548-366-31

Sequence documentation:

Sequence 31, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366-31

Alignment of: us-10-726-967a-1 x US-09-548-366-31 ..

Alignment segment 1/1: (-)

Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total length: 11
Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCTCCGCGCTCT

37
147

Sequence name: rmpb2ndb:US-10-652-927-23

Sequence documentation:

Sequence 23, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 28915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27


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; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-23
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Alignment of: us-10-726-967a-1 x US-10-476-935-23 ..

Alignment segment 1/1: (-)

	Quality:	Score:
Matching length:	32.00	348
Matching Percent Similarity:	81.82	11
Total Percent Similarity:	81.82	54.55
Gaps:	0	54.55
Total Percent Identity:		54.55

Alignment:

```

27 ArgLeuProLeuArgSergIyLeuGIyGIyAla
:::|||||:::|||||:::|||||:::
197 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT
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37
165

Sequence name: rmpbp2ndb:US-10-476-935-31

Sequence documentation:

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; Sequence 31, Application US/10476935
; Publication No. US20040234976a1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-31
```

Alignment of: us-10-726-967a-1 x US-10-476-935-31 ..

Alignment segment 1/1: (-)

	Quality:	Score:
Matching length:	32.00	348
Matching Percent Similarity:	81.82	11
Total Percent Similarity:	81.82	54.55
Gaps:	0	54.55
Total Percent Identity:		54.55

Alignment:

```

27 ArgLeuProLeuArgSergIyLeuGIyGIyAla
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT
```

37
147

Sequence name: rmpbp2ndb:US-10-940-867-23

Sequence documentation:

```

; Sequence 23, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-23
```

Alignment of: us-10-726-967a-1 x US-10-940-867-23 ..

Alignment segment 1/1: (-)

	Quality:	Score:
Matching length:	32.00	348
Matching Percent Similarity:	81.82	11
Total Percent Similarity:	81.82	54.55
Gaps:	0	54.55
Total Percent Identity:		54.55

Alignment:

```

27 ArgLeuProLeuArgSergIyLeuGIyGIyAla
:::|||||:::|||||:::|||||:::
197 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT
```

37
165

Sequence name: rmpbp2ndb:US-10-940-867-31

Sequence documentation:

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; Sequence 31, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-31
```

Alignment of: us-10-726-967a-1 x US-10-940-867-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-477-076-23

Sequence documentation:

Sequence 23, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-10-477-076-23

Alignment of: us-10-726-967a-1 x US-10-477-076-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
197 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
165

Sequence name: rnpb2ndb:US-10-477-076-31

Sequence documentation:

Sequence 31, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076

CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-10-477-076-31

Alignment of: us-10-726-967a-1 x US-10-477-076-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-627-473-3

Sequence documentation:

Sequence 3, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
TITLE OF INVENTION: (BACE) AND METHODS OF USE THEREOF
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681
PRIOR FILING DATE: 2002-07-26
NUMBER OF SEQ ID NOS: 46
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 3
LENGTH: 1386
TYPE: DNA
ORGANISM: Homo sapiens
US-10-627-473-3

Alignment of: us-10-726-967a-1 x US-10-627-473-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
185 AAGCTGCCCCCTCCGGCGGCTCCTCGGCTCT

37
153

Sequence name: rnpbp2ndb:US-10-214-932-103

Sequence documentation:

Sequence 103, Application US/10214932
Publication No. US20030100707A1
GENERAL INFORMATION:
APPLICANT: HWANG, Inhwan
APPLICANT: KIM, Dae Heon
APPLICANT: LEE, Yong Jik
TITLE OF INVENTION: SYSTEM FOR DETECTING PROTEASE
FILE REFERENCE: APB02/US
CURRENT APPLICATION NUMBER: US/10/214,932
CURRENT FILING DATE: 2002-08-08
NUMBER OF SEQ ID NOS: 133
SOFTWARE: PatentIn version 3.1
SEQ ID NO 103
LENGTH: 1506
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: gene
LOCATION: (1)..(1506)
OTHER INFORMATION: Gene for APP beta-secretase
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(1503)
OTHER INFORMATION: APP beta-secretase
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: GenBank/AF201468
US-10-214-932-103

US-10-214-932-103

Alignment of: us-10-726-967a-1 x US-10-214-932-103 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	349
Matching length:	11		11	
Matching Percent Similarity:	81.82		54.55	
Total Percent Similarity:	81.82		54.55	
Gaps:	0			
Total Percent Identity:			54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-10-372-730-8

Sequence documentation:

Sequence 8, Application US/10372730
Publication No. US20030167486A1
GENERAL INFORMATION:
APPLICANT: Jacobson, Helmut
APPLICANT: Moshbach-Ozmen, Laurence
APPLICANT: Neillbeck-Hochstetler, Peter
TITLE OF INVENTION: Double transgenic animal model for Alzheimer's Disease
FILE REFERENCE: Case 21132
CURRENT APPLICATION NUMBER: US/10/372,730
CURRENT FILING DATE: 2003-02-24
PRIOR APPLICATION NUMBER: EP02004331.1
PRIOR FILING DATE: 2002-03-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatentIn version 3.1
SEQ ID NO 8
LENGTH: 1506
TYPE: DNA

ORGANISM: Homo sapiens
US-10-372-730-8

Alignment of: us-10-726-967a-1 x US-10-372-730-8 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	349
Matching length:	11		11	
Matching Percent Similarity:	81.82		54.55	
Total Percent Similarity:	81.82		54.55	
Gaps:	0			
Total Percent Identity:			54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-10-281-092-5

Sequence documentation:

Sequence 5, Application US/10281092
Publication No. US20040121947A1
GENERAL INFORMATION:
APPLICANT: Ghosh, Arun K.
APPLICANT: Tang, Jordan J.N.
APPLICANT: Blicher, Geoffrey
APPLICANT: Chang, Wanpin
APPLICANT: Hong, Lin
APPLICANT: Koelsch, Gerald E.
APPLICANT: Loy, Jeffrey A.
APPLICANT: Turner, Robert T., III
TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
FILE REFERENCE: 2932.1001-004
CURRENT APPLICATION NUMBER: US/10/281,092
CURRENT FILING DATE: 2002-10-23
PRIOR APPLICATION NUMBER: US 10/032,818
PRIOR FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: PCT US01/50826
PRIOR FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: US 60/258,705
PRIOR FILING DATE: 2000-12-28
PRIOR APPLICATION NUMBER: US 60/275,756
PRIOR FILING DATE: 2001-03-14
PRIOR APPLICATION NUMBER: US 60/335,952
PRIOR FILING DATE: 2001-10-23
PRIOR APPLICATION NUMBER: US 60/333,545
PRIOR FILING DATE: 2001-11-27
PRIOR APPLICATION NUMBER: US 60/348,464
PRIOR FILING DATE: 2002-01-14
PRIOR APPLICATION NUMBER: US 60/348,615
PRIOR FILING DATE: 2002-01-14
PRIOR APPLICATION NUMBER: US 60/390,804
PRIOR FILING DATE: 2002-06-20
PRIOR APPLICATION NUMBER: US 60/397,557
PRIOR FILING DATE: 2002-07-19
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 59
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 5
LENGTH: 1506
TYPE: DNA
ORGANISM: Unknown
FEATURE:
OTHER INFORMATION: memapsin 2
US-10-281-092-5

Alignment of: us-10-726-967a-1 x US-10-281-092-5 ..

Alignment segment 1/1: (-)

Quality: 32.00 EScore: 349
Matching length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37
147

Sequence documentation:

Sequence 6, Application US/10275339A
Publication No. US20040110743A1
GENERAL INFORMATION:
APPLICANT: MIYAMOTO, Masasumi
APPLICANT: MATSUI, Junji
APPLICANT: FUKUMOTO, Hiroaki
APPLICANT: TARUI, Naoki
TITLE OF INVENTION: Beta Secretase Inhibitors
FILE REFERENCE: 2729 USOP
CURRENT APPLICATION NUMBER: US/10/275,339A
CURRENT FILING DATE: 2003-10-30
PRIOR APPLICATION NUMBER: PCT/JP01/04144
PRIOR FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: JP 2000-152758
PRIOR FILING DATE: 2000-05-19
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.2
SEQ ID NO 6
LENGTH: 1527
TYPE: DNA
ORGANISM: Homo sapiens
US-10-275-339A-6

Alignment of: us-10-726-967a-1 x US-10-275-339A-6 ..

Alignment segment 1/1: (-)

Quality: 32.00 EScore: 349
Matching length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-322-684-1

Sequence documentation:

Sequence 1, Application US/10322684
Publication No. US20030125257A1
GENERAL INFORMATION:
APPLICANT: Hoffmann-La Roche Inc.
TITLE OF INVENTION: Assay and screening method for identification of inhibitors of beta
SECRETASE
FILE REFERENCE: Case 21066
CURRENT APPLICATION NUMBER: US/10/322,684
CURRENT FILING DATE: 2002-12-18
PRIOR APPLICATION NUMBER: EP01130282.5
PRIOR FILING DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 1542

TYPE: DNA
ORGANISM: Homo sapiens
US-10-322-684-1

Alignment of: us-10-726-967a-1 x US-10-322-684-1 ..

Alignment segment 1/1: (-)

Quality: 32.00 EScore: 349
Matching length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
194 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37
162

Sequence name: rnpb2ndb:US-09-794-927-5

Sequence documentation:

Sequence 5, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Blenkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Ridgand
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
METHODS OF INVENTION: THERFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927-5

Alignment of: us-10-726-967a-1 x US-09-794-927-5 ..

Alignment segment 1/1: (-)

Quality: 32.00 EScore: 352
Matching length: 11
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-795-847-5

Sequence documentation:
; Sequence 5, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-5

Alignment of: us-10-726-967a-1 x US-09-795-847-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Sequence name: rnpb2ndb:US-09-794-743-5

Sequence documentation:
; Sequence 5, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-5

Alignment of: us-10-726-967a-1 x US-09-794-743-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	37
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Sequence name: rnpb2ndb:US-09-794-743-5

Sequence documentation:
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-5

Alignment of: us-10-726-967a-1 x US-09-794-743-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Sequence name: rnpb2ndb:US-09-794-748-5

Sequence documentation:
; Sequence 5, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-5

Alignment of: us-10-726-967a-1 x US-09-794-748-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Sequence name: rnpb2ndb:US-09-794-748-5

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-794-925-5

Sequence documentation:

Sequence 5, Application US/09794925
Patent No. US20020064819A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280H1

CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925-5

Alignment of: us-10-726-967a-1 x US-09-794-925-5

Alignment segment 1/1: (-)

Quality:	32.00	Score:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-681-442-5

Sequence documentation:

Sequence 5, Application US/09681442
Patent No. US20020081634A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-681-442-5

Alignment of: us-10-726-967a-1 x US-09-681-442-5

Alignment segment 1/1: (-)

Quality:	32.00	Score:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-09-908-943A-3

Sequence documentation:

Sequence 3, Application US/09908943A
Publication No. US20030017991A1
GENERAL INFORMATION:
APPLICANT: Yan, Riqiang
APPLICANT: Tomasselli, Alfredo G.
APPLICANT: Gurney, Mark E.
APPLICANT: Emmons, Thomas L.
APPLICANT: Bienkowski, Mike J.
APPLICANT: Heinrichson, Robert L.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281A.US1
CURRENT APPLICATION NUMBER: US/09/908,943A
CURRENT FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-908-943A-3

Alignment of: us-10-726-967a-1 x US-09-908-943A-3

Alignment segment 1/1: (-)

Quality:	32.00	Score:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37
147


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; Sequence 5, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-5

Alignment of: us-10-726-967a-1 x US-10-652-830-5 ..

Alignment segment 1/1: (-)

      Matching Quality: 32.00      EScore: 352
      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|:
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rnpb2ndb:US-10-652-045-5

Sequence documentation:
; Sequence 5, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
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; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-5

Alignment of: us-10-726-967a-1 x US-10-652-045-5 ..

Alignment segment 1/1: (-)

      Matching Quality: 32.00      EScore: 352
      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|:
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rnpb2ndb:US-10-801-487-3

Sequence documentation:
; Sequence 3, Application US/10801487
; Publication No. US20040241792A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
US-10-476-935-5

Alignment of: us-10-726-967a-1 x US-10-476-935-5 ..

Alignment segment 1/1: (-)

      Matching Quality: 32.00      EScore: 352
      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|:
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rnpb2ndb:US-10-476-935-5

Sequence documentation:
; Sequence 5, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-5
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TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281F
CURRENT APPLICATION NUMBER: US/10/801,487
CURRENT FILING DATE: 2004-03-16
PRIOR APPLICATION NUMBER: 09/908,943
PRIOR FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-10-801-487-3

Alignment of: us-10-726-967a-1 x US-10-801-487-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|:::|:::
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-801-938-3

Sequence documentation:
Sequence 3, Application US/10801938
Publication No. US20040253706A1
GENERAL INFORMATION:
APPLICANT: Yan et al.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281D
CURRENT APPLICATION NUMBER: US/10/801,938
CURRENT FILING DATE: 2004-03-16
PRIOR APPLICATION NUMBER: 09/908,943
PRIOR FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-10-801-938-3

Alignment of: us-10-726-967a-1 x US-10-801-938-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|:::|:::
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-801-509-3

Sequence documentation:
Sequence 3, Application US/10801509
Publication No. US20040254341A1
GENERAL INFORMATION:
APPLICANT: Yan et al.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281C
CURRENT APPLICATION NUMBER: US/10/801,509
CURRENT FILING DATE: 2004-03-16
PRIOR APPLICATION NUMBER: 09/908,943
PRIOR FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-10-801-509-3

Alignment of: us-10-726-967a-1 x US-10-801-509-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|:::|:::
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT

37
147

Sequence name: rnpb2ndb:US-10-801-486-3

Sequence documentation:
Sequence 3, Application US/10801486
Publication No. US20040254342A1
GENERAL INFORMATION:
APPLICANT: Yan et al.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281B
CURRENT APPLICATION NUMBER: US/10/801,486
CURRENT FILING DATE: 2004-03-16
PRIOR APPLICATION NUMBER: 09/908,943
PRIOR FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-10-801-486-3

Alignment of: us-10-726-967a-1 x US-10-801-486-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-940-867-5

Sequence documentation:

Sequence 5, Application US/10940867
Publication No. US20050026256A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.PCPA
CURRENT APPLICATION NUMBER: US/10/940,867
CURRENT FILING DATE: 2004-09-14
PRIOR APPLICATION NUMBER: US 09/806,194
PRIOR FILING DATE: 2001-03-26
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-10-940-867-5

Alignment of: us-10-726-967a-1 x US-10-940-867-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-477-076-5

Sequence documentation:

Sequence 5, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,483
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977

TYPE: DNA
ORGANISM: Homo sapiens
US-10-477-076-5

Alignment of: us-10-726-967a-1 x US-10-477-076-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-801-493-3

Sequence documentation:

Sequence 3, Application US/10801493
Publication No. US20050096457A1
GENERAL INFORMATION:
APPLICANT: Yan et al.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281E
CURRENT APPLICATION NUMBER: US/10/801,493
CURRENT FILING DATE: 2004-03-16
PRIOR APPLICATION NUMBER: 09/908,943
PRIOR FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-10-801-493-3

Alignment of: us-10-726-967a-1 x US-10-801-493-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-09-794-927-3

Sequence documentation:

Sequence 3, Application US/09794927
Patent No. US20010016324A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR

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/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/794,927
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-927-3
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Alignment of: us-10-726-967a-1 x US-09-794-927-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37
147

Sequence name: rnpb2ndb:US-09-795-847-3

Sequence documentation:

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/ Sequence 3, Application US/09795847
/ Patent No. US20010018208A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280DE
/ CURRENT APPLICATION NUMBER: US/09/795,847
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-795-847-3
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Alignment of: us-10-726-967a-1 x US-09-795-847-3 ..

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37
147

Sequence name: rnpb2ndb:US-09-794-743-3

Sequence documentation:

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/ Sequence 3, Application US/09794743
/ Patent No. US20010021391A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280BC
/ CURRENT APPLICATION NUMBER: US/09/794,743
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-743-3
```

Alignment of: us-10-726-967a-1 x US-09-794-743-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37
147

Sequence name: rnpb2ndb:US-09-794-748-3

Sequence documentation:

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/ Sequence 3, Application US/09794748
/ Patent No. US20020037315A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
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; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62801L
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-3

```

Alignment of: us-10-726-967a-1 x US-09-794-748-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
147

```

Sequence name: rnpb2ndb:US-09-794-925-3

Sequence documentation:

```

; Sequence 3, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/62801H
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3

```

```

; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-3

```

Alignment of: us-10-726-967a-1 x US-09-794-925-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
147

```

Sequence name: rnpb2ndb:US-09-681-442-3

Sequence documentation:

```

; Sequence 3, Application US/09681442
; Patent No. US20020081534A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-3

```

Alignment of: us-10-726-967a-1 x US-09-681-442-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
147

```

Sequence name: rnpb2ndb:US-09-908-943A-1

Alignment of: us-10-726-967a-1 x US-09-869-414-3 ..
Alignment segment 1/1: (-)

Sequence documentation:
Sequence 3, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-927-3

Alignment of: us-10-726-967a-1 x US-10-652-927-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	353
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleuProleuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::
179 AAGCTGCCCCCTCCGGCGGCGCTCTCGGCTCT

Sequence name: rmpb2ndb:US-10-652-830-3

Sequence documentation:

Sequence 3, Application US/10652830
Publication No. US20040048303A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280N1
CURRENT APPLICATION NUMBER: US/10/652,830
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-830-3

Alignment of: us-10-726-967a-1 x US-10-652-830-3 ..

Alignment segment 1/1: (-)

Quality: 32.00

Score: 353

Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleuProleuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::
179 AAGCTGCCCCCTCCGGCGGCGCTCTCGGCTCT

Sequence name: rmpb2ndb:US-10-652-045-3

Sequence documentation:

Sequence 3, Application US/10652045
Publication No. US20040166507A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280N2
CURRENT APPLICATION NUMBER: US/10/652,045
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-10-652-045-3

Alignment of: us-10-726-967a-1 x US-10-652-045-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	353
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleuProleuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::
179 AAGCTGCCCCCTCCGGCGGCGCTCTCGGCTCT

Sequence name: rmpb2ndb:US-10-476-935-3

Sequence documentation:

Sequence 3, Application US/10476935
Publication No. US20040234976A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M1
CURRENT APPLICATION NUMBER: US/10/476,935
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13

Sequence documentation:
; Sequence 1, Application US/10801938
; Publication No. US20040253706A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281D
; CURRENT APPLICATION NUMBER: US/10/801,938
; PRIORITY FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-3

Alignment of: us-10-726-967a-1 x US-10-476-935-3 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	353
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-10-801-487-1

Sequence documentation:
; Sequence 1, Application US/10801487
; Publication No. US20040241792A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281F
; CURRENT APPLICATION NUMBER: US/10/801,487
; PRIORITY FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-487-1

Alignment of: us-10-726-967a-1 x US-10-801-487-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	353
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-10-801-938-1

Sequence documentation:
; Sequence 1, Application US/10801938
; Publication No. US20040253706A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281D
; CURRENT APPLICATION NUMBER: US/10/801,938
; PRIORITY FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-938-1

Alignment of: us-10-726-967a-1 x US-10-801-938-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	353
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rnpbp2ndb:US-10-801-509-1

Sequence documentation:
; Sequence 1, Application US/10801509
; Publication No. US20040254341A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281C
; CURRENT APPLICATION NUMBER: US/10/801,509
; PRIORITY FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-801-509-1

Alignment of: us-10-726-967a-1 x US-10-801-509-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	353
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCGTCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-801-486-1

Sequence documentation:

Publication 1, Application US/10801486
Publication No. US20040254342A1
GENERAL INFORMATION:

APPLICANT: Yan et al.

TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

FILE REFERENCE: 29915/00281B

CURRENT APPLICATION NUMBER: US/10/801,486

CURRENT FILING DATE: 2004-03-16

PRIOR APPLICATION NUMBER: 09/908,943

PRIOR FILING DATE: 2001-07-19

PRIOR APPLICATION NUMBER: 60/219,795

PRIOR FILING DATE: 2000-07-19

NUMBER OF SEQ ID NOS: 197

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 1

LENGTH: 2070

TYPE: DNA

ORGANISM: Homo sapiens

US-10-801-486-1

Alignment of: us-10-726-967a-1 x US-10-801-486-1 ..

Alignment segment 1/1: (-)

Matching Percent Similarity: 81.82

Total Percent Similarity: 81.82

Gaps: 0

Quality: 32.00

Score: 11

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

179 AGCGTCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-801-493-1

Sequence documentation:

Publication 1, Application US/10801493
Publication No. US20050096457A1
GENERAL INFORMATION:

APPLICANT: Yan et al.

TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

FILE REFERENCE: 29915/00281B

CURRENT APPLICATION NUMBER: US/10/801,493

CURRENT FILING DATE: 2004-03-16

PRIOR APPLICATION NUMBER: 09/908,943

PRIOR FILING DATE: 2001-07-19

NUMBER OF SEQ ID NOS: 197

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 1

LENGTH: 2070

TYPE: DNA

ORGANISM: Homo sapiens

US-10-477-076-3

Alignment of: us-10-726-967a-1 x US-10-477-076-3 ..

Alignment segment 1/1: (-)

Matching Percent Similarity: 81.82

Total Percent Similarity: 81.82

Gaps: 0

Quality: 32.00

Score: 11

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

Score: 353

Length: 11

Matching Percent Identity: 54.55

Total Percent Identity: 54.55

;; PRIOR FILING DATE: 2000-07-19
;; NUMBER OF SEQ ID NOS: 197
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 1
;; LENGTH: 2070
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-10-801-493-1

Alignment of: us-10-726-967a-1 x US-10-801-493-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	353
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGGCTCT

37
147

Sequence name: rnpbp2ndb:US-09-969-671A-1

Sequence documentation:

;; Sequence 1, Application US/09969671A
;; Publication No. US20030036112A1
;; GENERAL INFORMATION:
;; APPLICANT: CHAPMAN, CONRAD G.
;; APPLICANT: MURPHY, KAY
;; APPLICANT: POWELL, DAVID J.
;; APPLICANT: SMITH, TRUDI S.
;; TITLE OF INVENTION: ASP2
;; FILE REFERENCE: GH-70368-D1
;; CURRENT APPLICATION NUMBER: US/09/969, 671A
;; PRIOR FILING DATE: 2001-10-03
;; PRIOR APPLICATION NUMBER: UK 9701684.4
;; PRIOR FILING DATE: 1997-01-28
;; PRIOR APPLICATION NUMBER: 09/009,191
;; PRIOR FILING DATE: 1998-01-20
;; PRIOR APPLICATION NUMBER: 09/694,200
;; NUMBER OF SEQ ID NOS: 6
;; SOFTWARE: FastSeq for Windows Version 4.0
;; SEQ ID NO 1
;; LENGTH: 2541
;; TYPE: DNA
;; ORGANISM: Homo sapiens
;; FEATURE:
;; NAME/KEY: unknown
;; LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516)
;; LOCATION: (2520) (2522) (2525) (2529) (2539) (2540)
;; OTHER INFORMATION: wherein n can be represented by a, c, t, or g
US-09-969-671A-1

Alignment of: us-10-726-967a-1 x US-09-969-671A-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	355
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGGCTCT

37
147

Sequence name: rnpbp2ndb:US-10-308-365-1

Sequence documentation:

;; Sequence 1, Application US/10308365
;; Publication No. US20030109022A1
;; GENERAL INFORMATION:
;; APPLICANT: CHAPMAN, CONRAD G.
;; APPLICANT: MURPHY, KAY
;; APPLICANT: POWELL, DAVID J.
;; APPLICANT: SMITH, TRUDI S.
;; TITLE OF INVENTION: ASP 2
;; FILE REFERENCE: GH-70368-2
;; CURRENT APPLICATION NUMBER: US/10/308,365
;; CURRENT FILING DATE: 2002-12-03
;; PRIOR APPLICATION NUMBER: US/09/694,200
;; PRIOR FILING DATE: 2000-10-23
;; PRIOR APPLICATION NUMBER: UK 9701684.4
;; PRIOR FILING DATE: 1997-01-28
;; PRIOR APPLICATION NUMBER: 09/009,191
;; NUMBER OF SEQ ID NOS: 6
;; SOFTWARE: FastSeq for Windows Version 3.0
;; SEQ ID NO 1
;; LENGTH: 2541
;; TYPE: DNA
;; ORGANISM: HOMO SAPIENS
;; FEATURE: FEATURE: MISCELLANEOUS FEATURE
;; NAME/KEY: UNSURE
;; LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516) (2520)
;; LOCATION: (2522) (2525) (2529) (2539) (2540)
;; OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t
US-10-308-365-1

Alignment of: us-10-726-967a-1 x US-10-308-365-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	355
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGGCTCT

37
147

Sequence name: rnpbp2ndb:US-10-829-717-1

Sequence documentation:

;; Sequence 1, Application US/10829717
;; Publication No. US20050101556A1
;; GENERAL INFORMATION:
;; APPLICANT: CHAPMAN, CONRAD G.
;; APPLICANT: MURPHY, KAY
;; APPLICANT: POWELL, DAVID J.
;; APPLICANT: SMITH, TRUDI S.
;; TITLE OF INVENTION: ASP 2
;; FILE REFERENCE: GH-70368-2
;; CURRENT APPLICATION NUMBER: US/10/829,717
;; CURRENT FILING DATE: 2004-04-22
;; PRIOR APPLICATION NUMBER: US/10/308,365
;; PRIOR FILING DATE: 2002-12-03
;; PRIOR APPLICATION NUMBER: US/09/694,200
;; PRIOR FILING DATE: 2000-10-23
;; PRIOR APPLICATION NUMBER: UK 9701684.4
;; PRIOR FILING DATE: 1997-01-28
;; PRIOR APPLICATION NUMBER: 09/009,191
;; NUMBER OF SEQ ID NOS: 6

SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 1
; LENGTH: 2541
; TYPE: DNA
; ORGANISM: HOMO SAPIENS
; FEATURE: FEATURE: MISCELLANEOUS FEATURE
; NAME/KEY: UNSURE
; LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516) (2520)
; LOCATION: (2522) (2525) (2529) (2539) (2540)
; OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t
; US-10-829-717-1

Alignment of: us-10-726-967a-1 x US-10-829-717-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	355
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla	37
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT	147

Sequence name: rnpb2ndb:US-09-796-264-1

Sequence documentation:

; Sequence 1, Application US/09796264
; Patent No. US20020049303A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Lin, Jordan
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: OMRF 179
; CURRENT APPLICATION NUMBER: US/09/796,264
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/604,608
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 3252
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-796-264-1

Alignment of: us-10-726-967a-1 x US-09-796-264-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	358
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla	37
140 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT	108

Sequence name: rnpb2ndb:US-09-845-226-1

Sequence documentation:

; Sequence 1, Application US/09845226
; Patent No. US20020115600A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Hong, Lin
; APPLICANT: Ghosh, Arun K.
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: OMRF 182
; CURRENT APPLICATION NUMBER: US/09/845,226
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: 09/603,713
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 3252
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-845-226-1

Alignment of: us-10-726-967a-1 x US-09-845-226-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	358
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla	37
140 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT	108

Sequence name: rnpb2ndb:US-09-795-903A-1

Sequence documentation:

; Sequence 1, Application US/09795903A
; Patent No. US20020164760A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Lin, Jordan
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: OMRF 179
; CURRENT APPLICATION NUMBER: US/09/795,903A
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/604,608
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27

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: PRIOR APPLICATION NUMBER: 60/210,232
:
: PRIOR FILING DATE: 2000-06-08
:
: NUMBER OF SEQ ID NOS: 31
:
: SOFTWARE: PatentIn Ver. 2.1
:
: SEQ ID NO 1
:
: LENGTH: 3252
:
: TYPE: DNA
:
: ORGANISM: Homo sapiens
:
: IS-09-795-903A-1

```

Alignment of: us-10-726-967a-1 x US-09-795-903A-1 . .

Alignment segment 1/1: (-)

Quality:	32.00	Escape:	358
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
   ::||| ||| ||| ||| ||| ||| |||
140 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 10

```

Sequence name: rnpbp2ndb:US-10-032-818-1

Sequence documentation:

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Sequence 1, Application US/10037818
Publication No. US20030092629A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Koelsch, Gerald
APPLICANT: Ghosh, Arun K.
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
FILE REFERENCE: 2932.1006-007
CURRENT APPLICATION NUMBER: US/10/032,818
CURRENT FILING DATE: 2001-12-28
PRIORITY APPLICATION NUMBER: US 60/275,756
PRIORITY FILING DATE: 2001-03-14
PRIORITY APPLICATION NUMBER: US 60/258,705
PRIORITY FILING DATE: 2000-12-28
NUMBER OF SEQ ID NOS: 83
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 1
LENGTH: 3252
TYPE: DNA
ORGANISM: Homo sapiens
US-10-032-818-1

```

Alignment of: us-10-726-967a-1 x US-10-032-818-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escape:	358
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
   ::||| ||| ||| ||| ||| ||| ||| |||
140 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGCTCTT    100

```

Sequence name: rnpbp2ndb:US-10-820-953-1

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Sequence documentation:
; Sequence 1, Application US/10820953
; Publication No. US20040167075A1
; GENERAL INFORMATION:
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? APPLICANT: Tang, Jordan J.N.
 ? APPLICANT: Hong, Lin
 ? TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
 ? FILE REFERENCE: OMRF 182
 ? CURRENT APPLICATION NUMBER: US/10/820,953
 ? CURRENT FILING DATE: 2004-04-08
 ? PRIOR APPLICATION NUMBER: US/09/603,713
 ? PRIOR FILING DATE: 2000-06-27
 ? PRIOR APPLICATION NUMBER: 60/141,363
 ? PRIOR FILING DATE: 1999-06-28
 ? PRIOR APPLICATION NUMBER: 60/168,060
 ? PRIOR FILING DATE: 1999-11-30
 ? PRIOR APPLICATION NUMBER: 60/177,836
 ? PRIOR FILING DATE: 2000-01-25
 ? PRIOR APPLICATION NUMBER: 60/178,368
 ? PRIOR FILING DATE: 2000-01-27
 ? PRIOR APPLICATION NUMBER: 60/210,292
 ? PRIOR FILING DATE: 2000-06-08
 ? NUMBER OF SEQ ID NOS: 31
 ? SOFTWARE: PatentIn Ver. 2.1
 ? SEQ ID NO 1
 ? LENGTH: 3252
 ? TYPE: DNA
 ? ORGANISM: Homo sapiens
 ? US-10-820-953-1

Alignment of: us-10-726-967a-1 x US-10-820-953-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	358
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyAla	37
:::		:::
140	AAGCTGCCCCCTCCGGCCGGGCTCCTCGGCTCT	108

Sequence name: rnpbp2ndb:US-10-773-754-1

Sequence documentation:

Sequence 1: Application US/10773754
Publication No. US20040220079A1
GENERAL INFORMATION:
APPLICANT: Koelsch, Gerald
APPLICANT: Tang, Jordan J. N.
APPLICANT: Hong, Ian
APPLICANT: Ghosh, Arun K.
APPLICANT: The Board of Trustees of the University of Illinois
TITLE OF INVENTION: Oklahoma Medical Research Foundation
FILE REFERENCE: 022466-000930US
CURRENT APPLICATION NUMBER: US/10/773,754
CURRENT FILING DATE: 2004-02-06
PRIOR APPLICATION NUMBER: US 60/141,363
PRIOR FILING DATE: 1999-06-28
PRIOR APPLICATION NUMBER: US 60/168,060
PRIOR FILING DATE: 1999-11-30
PRIOR APPLICATION NUMBER: US 60/177,836
PRIOR FILING DATE: 2000-01-25
PRIOR APPLICATION NUMBER: US 60/178,368
PRIOR FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: US 60/210,292
PRIOR FILING DATE: 2000-06-08
PRIOR APPLICATION NUMBER: US 09/603,713
PRIOR FILING DATE: 2000-06-27
PRIOR APPLICATION NUMBER: US 09/845,226
PRIOR FILING DATE: 2001-04-30

;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO: 27
;; LENGTH: 1278
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-794-743-27

Alignment of: us-10-726-967a-1 x US-09-794-743-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00	Score:	365
Matching length:	12		Total length:	16
Matching Percent Similarity:	83.33		Matching Percent Identity:	58.33
Total Percent Similarity:	62.50		Total Percent Identity:	43.75
Gaps:	1			

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
|||||.....|
1170 CGCTTGCCATGTGCACGATGAGTTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnpbp2ndb:US-09-794-748-27

Sequence documentation:

;; Sequence 27, Application US/09794748
;; Patent No. US20020037315A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrichson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
;; TITLE OF INVENTION: USES
;; FILE OF INVENTION: THEREFOR
;; FILE REFERENCE: 28341/62801L
;; CURRENT APPLICATION NUMBER: US/09/794,748
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO: 27
;; LENGTH: 1278
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-794-748-27

Alignment of: us-10-726-967a-1 x US-09-794-748-27 ..

Alignment segment 1/1: (+)

Quality: 28.00

Score:

365

	Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33		Matching Percent Identity:	58.33
Total Percent Similarity:	62.50		Total Percent Identity:	43.75
Gaps:	1			

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
|||||.....|
1170 CGCTTGCCATGTGCACGATGAGTTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnpbp2ndb:US-09-794-925-27

Sequence documentation:

;; Sequence 27, Application US/09794925
;; Patent No. US20020064819A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrichson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; TITLE OF INVENTION: THEREFOR
;; FILE REFERENCE: 28341/62801L
;; CURRENT APPLICATION NUMBER: US/09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO: 27
;; LENGTH: 1278
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-794-925-27

Alignment of: us-10-726-967a-1 x US-09-794-925-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00	Score:	365
Matching length:	12		Total length:	16
Matching Percent Similarity:	83.33		Matching Percent Identity:	58.33
Total Percent Similarity:	62.50		Total Percent Identity:	43.75
Gaps:	1			

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
|||||.....|
1170 CGCTTGCCATGTGCACGATGAGTTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnpbp2ndb:US-09-681-442-27

Sequence documentation:

;; Sequence 27, Application US/09681442
;; Patent No. US20020081634A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrichson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
US-09-794-748-27

TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-681-442-27

Alignment of: us-10-726-967a-1 x US-09-681-442-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CCCTGCCATGTGCACGATGAGTTCAAGCGCGGTGAAGGCC 1217

Sequence name: rnpb2ndb:US-09-869-414-27

Sequence documentation:
Sequence 27, Application US/09869414
Publication No. US20030077226A1
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-27

Alignment of: us-10-726-967a-1 x US-09-869-414-27 ..

Alignment segment 1/1: (+)

Quality: 28.00

Score: 365

Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CCCTGCCATGTGCACGATGAGTTCAAGCGCGGTGAAGGCC 1217

Sequence name: rnpb2ndb:US-09-548-366-27

Sequence documentation:

Sequence 27, Application US/09548366
Publication No. US20030104365A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366-27

Alignment of: us-10-726-967a-1 x US-09-548-366-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CCCTGCCATGTGCACGATGAGTTCAAGCGCGGTGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-652-927-27

Sequence documentation:
Sequence 27, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 28915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27

Alignment of: us-10-726-967a-1 x US-09-869-414-27 ..

Alignment segment 1/1: (+)

Quality: 28.00

Score: 365

```

; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-27
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Alignment of: us-10-726-967a-1 x US-10-652-927-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

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27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
|||||
1170 CGCTTGCCATGTGCACGATGATTCAGACGCGCGGTGGAAGGCC 1217
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Sequence name: rnpb2ndb:US-10-652-830-27

Sequence documentation:

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; Sequence 27, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-27
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Alignment of: us-10-726-967a-1 x US-10-652-830-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33

Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

```

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
|||||
1170 CGCTTGCCATGTGCACGATGATTCAGACGCGCGGTGGAAGGCC 1217
```

Sequence name: rnpb2ndb:US-10-652-045-27

Sequence documentation:

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; Sequence 27, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-27
```

Alignment of: us-10-726-967a-1 x US-10-652-045-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

```

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
|||||
1170 CGCTTGCCATGTGCACGATGATTCAGACGCGCGGTGGAAGGCC 1217
```

Sequence name: rnpb2ndb:US-10-476-935-27

Sequence documentation:

```

; Sequence 27, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
```

PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-10-476-935-27

Alignment of: us-10-726-967a-1 x US-10-476-935-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
1170 CGCTTGCCATGTGCACGATGAGTTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-940-867-27

Sequence documentation:

Sequence 27, Application US/10940867
Publication No. US20050026256A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Blenkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177, PCPA
CURRENT APPLICATION NUMBER: US/10/940,867
CURRENT FILING DATE: 2004-09-14
PRIOR APPLICATION NUMBER: US 09/806,194
PRIOR FILING DATE: 2001-03-26
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-10-940-867-27

Alignment of: us-10-726-967a-1 x US-10-940-867-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
1170 CGCTTGCCATGTGCACGATGAGTTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-477-076-27

Sequence documentation:

Sequence 27, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-10-477-076-27

Alignment of: us-10-726-967a-1 x US-10-477-076-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
1170 CGCTTGCCATGTGCACGATGAGTTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-627-473-7

Sequence documentation:

Sequence 7, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
APPLICANT: SHAH, ALBEM
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681
PRIOR FILING DATE: 2002-07-26
NUMBER OF SEQ ID NOS: 46
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 7
LENGTH: 1368
TYPE: DNA
ORGANISM: Homo sapiens
US-10-627-473-7

APPLICANT: PARODI, LUIS A.

LENGTH: 2043
TYPE: DNA

LENGTH: 2043

LENGTH: 2043
TYPE: DNA

LENGTH: 2043

LENGTH: 2043
TYPE: DNA

ORGANISM: Mus musculus
US-09-795-847-7

Alignment of: us-10-726-967a-1 x US-09-795-847-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGAAACCAACCCAGATGTGTCACGGGCGCTCCA 1527

Sequence name: rnpbp2ndb:US-09-794-743-7

Sequence documentation:

Sequence 7, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
FILE REFERENCE: 28341/6280BC
CURRENT FILING DATE: 2001-02-27
CURRENT APPLICATION NUMBER: US/09/794,743
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-794-743-7

Alignment of: us-10-726-967a-1 x US-09-794-743-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGAAACCAACCCAGATGTGTCACGGGCGCTCCA 1527

Sequence name: rnpbp2ndb:US-09-794-748-7

Sequence documentation:

Sequence 7, Application US/09794748
Patent No. US20020037315A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

FILE REFERENCE: 28341/6280JL

CURRENT FILING DATE: 2001-02-27

CURRENT APPLICATION NUMBER: US/09/794,748

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 7

LENGTH: 2043

TYPE: DNA

ORGANISM: Mus musculus

US-09-794-748-7

Alignment of: us-10-726-967a-1 x US-09-794-748-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGAAACCAACCCAGATGTGTCACGGGCGCTCCA 1527

Sequence name: rnpbp2ndb:US-09-794-925-7

Sequence documentation:

Sequence 7, Application US/09794925
Patent No. US20020064819A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280H1
CURRENT FILING DATE: 2001-02-27
CURRENT APPLICATION NUMBER: US/09/794,925
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594

38

NUMBER OF SEQ ID NOS: 65

LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-10-652-045-7

Alignment of: us-10-726-967a-1 x US-10-652-045-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCAACCGATGTGTCTCCAGGGCGCTCCCA 1527

Sequence name: rnpb2ndb:US-10-476-935-7

Sequence documentation:

Sequence 7, Application US/10476935
Publication No. US20040234976A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M1
CURRENT APPLICATION NUMBER: US/10/476,935
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-10-476-935-7

Alignment of: us-10-726-967a-1 x US-10-476-935-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCAACCGATGTGTCTCCAGGGCGCTCCCA 1527

Sequence name: rnpb2ndb:US-10-940-867-7

Sequence documentation:

Sequence 7, Application US/10940867
Publication No. US20050026256A1
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177, PCPA

CURRENT APPLICATION NUMBER: US/10/940,867

CURRENT FILING DATE: 2004-09-14

PRIOR APPLICATION NUMBER: US 09/806,194

PRIOR FILING DATE: 2001-03-26

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 49

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 7

LENGTH: 2043

TYPE: DNA

ORGANISM: Mus musculus

US-10-940-867-7

Alignment of: us-10-726-967a-1 x US-10-940-867-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCAACCGATGTGTCTCCAGGGCGCTCCCA 1527

Sequence name: rnpb2ndb:US-10-477-076-7

Sequence documentation:

Sequence 7, Application US/10477076
Publication No. US20050080232A1
GENERAL INFORMATION:
APPLICANT: Belinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M2
CURRENT APPLICATION NUMBER: US/10/477,076
CURRENT FILING DATE: 2003-11-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-10-477-076-7

Alignment of: us-10-726-967a-1 x US-10-477-076-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
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US-09-794-743-27

Alignment of: us-10-726-967a-1 x US-09-794-743-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	373
Matching length:	8	Total length:	8
Percent Similarity:	87.50	Percent Identity:	62.50
Total Similarity:	87.50	Total Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerglyLeuGlyGlyAlaPro	38
:	:	
242	AGGAGGGGTGGGGGCGACACCC	219

Sequence name: rnpb2ndb:US-09-794-748-27

Sequence documentation:

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; Sequence 27, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62801L
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-748-27
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Alignment of: us-10-726-967a-1 x US-09-794-748-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	373
Matching length:	8	Total length:	8
Percent Similarity:	87.50	Percent Identity:	62.50
Total Similarity:	87.50	Total Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerglyLeuGlyGlyAlaPro	38
:	:	
242	AGGAGGGGTGGGGGCGACACCC	219

Sequence name: rnpb2ndb:US-09-794-925-27

Sequence documentation:

; Sequence 27, Application US/09794925

Patent No. US20020064819A1

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; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/62801H
; CURRENT APPLICATION NUMBER: US/09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-925-27
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Alignment of: us-10-726-967a-1 x US-09-794-925-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	373
Matching length:	8	Total length:	8
Percent Similarity:	87.50	Percent Identity:	62.50
Total Similarity:	87.50	Total Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerglyLeuGlyGlyAlaPro	38
:	:	
242	AGGAGGGGTGGGGGCGACACCC	219

Sequence name: rnpb2ndb:US-09-681-442-27

Sequence documentation:

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; Sequence 27, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
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SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-27

Alignment of: us-10-726-967a-1 x US-09-681-442-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::||| |||::||| |||
242 AGGAAGGGGTGGGGGCGACACCC

38
219

Sequence name: rnpb2ndb:US-09-869-414-27

Sequence documentation:
; Sequence 27, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-27

Alignment of: us-10-726-967a-1 x US-09-869-414-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::||| |||::||| |||
242 AGGAAGGGGTGGGGGCGACACCC

38
219

Sequence name: rnpb2ndb:US-09-548-366-27

Sequence documentation:
; Sequence 27, Application US/09548366

Publication No. US20030104365A1
; GENERAL INFORMATION:

; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van, Richard

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
; FILE REFERENCE: 28341/6280A

; CURRENT APPLICATION NUMBER: US/09/548,366
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366-27

Alignment of: us-10-726-967a-1 x US-09-548-366-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::||| |||::||| |||
242 AGGAAGGGGTGGGGGCGACACCC

38
219

Sequence name: rnpb2ndb:US-10-652-927-27

Sequence documentation:

; Sequence 27, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:

; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||:::|||||
242 AGGAAGGGGTGGGGGCGACGCC

38
219

Sequence name: rnpb2ndb:US-10-940-867-27

Sequence documentation:

; Sequence 27, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177, PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-10-940-867-27

Alignment of: us-10-726-967a-1 x US-10-940-867-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||:::|||||
242 AGGAAGGGGTGGGGGCGACGCC

38
219

Sequence name: rnpb2ndb:US-10-477-076-27

Sequence documentation:

; Sequence 27, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-10-477-076-27

Alignment of: us-10-726-967a-1 x US-10-477-076-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||:::|||||
242 AGGAAGGGGTGGGGGCGACGCC

38
219

Sequence name: rnpb2ndb:US-10-372-473-8

Sequence documentation:

; Sequence 8, Application US/10372473
; Publication No. US20040005691A1
; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; APPLICANT: Howe, W. Jeffery
; TITLE OF INVENTION: Modified BACE
; FILE REFERENCE: MBHB 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; CURRENT FILING DATE: 2003-02-21
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 8
; LENGTH: 1365
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc.feature
; OTHER INFORMATION: DNA sequence of recombinant human BACE with P33K mutation from E.
; US-10-372-473-8

Alignment of: us-10-726-967a-1 x US-10-372-473-8 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	374
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||:::|||||
332 AGGAAGGGGTGGGGGCGACGCC

38
309

Sequence name: rnpb2ndb:US-10-627-473-9

Sequence documentation:

Sequence 9, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
APPLICANT: SHAH, ALBEM
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681
PRIOR FILING DATE: 2002-07-26
NUMBER OF SEQ ID NOS: 46
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 9
LENGTH: 1365
TYPE: DNA
ORGANISM: Homo sapiens
US-10-627-473-9

Alignment of: us-10-726-967a-1 x US-10-627-473-9 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	374
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
329 AGGAAGGGGTGGGGGACACACC

38
306

Sequence name: rnpb2ndb:US-10-627-473-5

Sequence documentation:

Sequence 5, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
APPLICANT: SHAH, ALBEM
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681
PRIOR FILING DATE: 2002-07-26
NUMBER OF SEQ ID NOS: 46
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 5
LENGTH: 1368
TYPE: DNA
ORGANISM: Homo sapiens
US-10-627-473-5

Alignment of: us-10-726-967a-1 x US-10-627-473-5 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	374
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
332 AGGAAGGGGTGGGGGACACACC

38
309

Sequence name: rnpb2ndb:US-10-627-473-13

Sequence documentation:

Sequence 13, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
APPLICANT: SHAH, ALBEM
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681
PRIOR FILING DATE: 2002-07-26
NUMBER OF SEQ ID NOS: 46
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 13
LENGTH: 1368
TYPE: DNA
ORGANISM: Homo sapiens
US-10-627-473-13

Alignment of: us-10-726-967a-1 x US-10-627-473-13 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	374
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
332 AGGAAGGGGTGGGGGACACACC

38
309

Sequence name: rnpb2ndb:US-10-627-473-17

Sequence documentation:

Sequence 17, Application US/10627473
Publication No. US20040096950A1
GENERAL INFORMATION:
APPLICANT: VUILLARD, LAURENT MICHEL MARIE
APPLICANT: PATEL, SAHIL JOE
APPLICANT: YON, JEFFREY ROLAND
APPLICANT: CLEASBY, ANNE
APPLICANT: HAMILTON, BRUCE JOHN
APPLICANT: SHAH, ALBEM
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
FILE REFERENCE: 674553-2002.1
CURRENT APPLICATION NUMBER: US/10/627,473
CURRENT FILING DATE: 2003-07-25
PRIOR APPLICATION NUMBER: 60/398,681

;; PRIOR FILING DATE: 2002-07-26
;; NUMBER OF SEQ ID NOS: 46
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO: 17
;; LENGTH: 1383
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-10-627-473-17

Alignment of: us-10-726-967a-1 x US-10-627-473-17 ..

Alignment segment 1/1: (-)

Matching length:	26.00	Score:	374
Matching Percent Similarity:	87.50	Total length:	8
Total Percent Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::||| |||::|||
329 AGGAAGGGGTGGGGGCGACACCC

38
306

Sequence name: rnpbp2ndb:US-10-627-473-11

Sequence documentation:

;; Sequence 11, Application US/10627473
;; Publication No. US20040096950A1
;; GENERAL INFORMATION:
;; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
;; APPLICANT: PATEL, SAHIL JOE
;; APPLICANT: YON, JEFFREY ROLAND
;; APPLICANT: CLEASBY, ANNE
;; APPLICANT: HAMILTON, BRUCE JOHN
;; APPLICANT: SHAH, ALEEM
;; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
;; TITLE OF INVENTION: (BACE) AND METHODS OF USE THEREOF
;; FILE REFERENCE: 674553-2002.1
;; CURRENT APPLICATION NUMBER: US/10/627,473
;; CURRENT FILING DATE: 2003-07-25
;; PRIOR APPLICATION NUMBER: 60/398,681
;; PRIOR FILING DATE: 2002-07-26
;; NUMBER OF SEQ ID NOS: 46
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO: 11
;; LENGTH: 1386
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-10-627-473-11

Alignment of: us-10-726-967a-1 x US-10-627-473-11 ..

Alignment segment 1/1: (-)

Matching length:	26.00	Score:	374
Matching Percent Similarity:	87.50	Total length:	8
Total Percent Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::||| |||::|||
332 AGGAAGGGGTGGGGGCGACACCC

38
309

Sequence name: rnpbp2ndb:US-09-969-671A-3

Sequence documentation:

;; Sequence 3, Application US/09969671A
;; Publication No. US20030036112A1

;; GENERAL INFORMATION:

;; APPLICANT: CHAPMAN, CONRAD G.
;; APPLICANT: MURPHY, KAY
;; APPLICANT: POWELL, DAVID J.
;; APPLICANT: SMITH, TRUDI S.
;; TITLE OF INVENTION: ASP2
;; FILE REFERENCE: GH-70368-D1
;; CURRENT APPLICATION NUMBER: US/09/969,671A
;; CURRENT FILING DATE: 2001-10-03
;; PRIOR APPLICATION NUMBER: UK 9701684.4
;; PRIOR FILING DATE: 1997-01-28
;; PRIOR APPLICATION NUMBER: 09/009,191
;; PRIOR FILING DATE: 1998-01-20
;; PRIOR APPLICATION NUMBER: 09/694,200
;; PRIOR FILING DATE: 2000-10-23
;; NUMBER OF SEQ ID NOS: 6
;; SOFTWARE: FastSeq for Windows Version 4.0
;; SEQ ID NO: 3
;; LENGTH: 2370
;; TYPE: DNA
;; ORGANISM: Homo sapiens
;; FEATURE:
;; NAME/KEY:
;; LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)
;; LOCATION: (2349) (2351) (2354) (2358) (2368) (2369)
;; OTHER INFORMATION: wherein n can be represented by a, c, t, or g
US-09-969-671A-3

Alignment of: us-10-726-967a-1 x US-09-969-671A-3 ..

Alignment segment 1/1: (-)

Matching length:	26.00	Score:	379
Matching Percent Similarity:	87.50	Total length:	8
Total Percent Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::||| |||::|||
155 AGGAAGGGGTGGGGGCGACACCC

38
132

Sequence name: rnpbp2ndb:US-10-308-365-3

Sequence documentation:

;; Sequence 3, Application US/10308365
;; Publication No. US20030109022A1
;; GENERAL INFORMATION:
;; APPLICANT: CHAPMAN, CONRAD G.
;; APPLICANT: MURPHY, KAY
;; APPLICANT: POWELL, DAVID J.
;; APPLICANT: SMITH, TRUDI S.
;; TITLE OF INVENTION: ASP 2
;; FILE REFERENCE: GH-70368-2
;; CURRENT APPLICATION NUMBER: US/10/308,365
;; CURRENT FILING DATE: 2002-12-03
;; PRIOR APPLICATION NUMBER: US/09/694,200
;; PRIOR FILING DATE: 2000-10-23
;; PRIOR APPLICATION NUMBER: UK 9701684.4
;; PRIOR FILING DATE: 1997-01-28
;; PRIOR APPLICATION NUMBER: 09/009,191
;; PRIOR FILING DATE: 1998-01-20
;; NUMBER OF SEQ ID NOS: 6
;; SOFTWARE: FastSeq for Windows Version 3.0
;; SEQ ID NO: 3
;; LENGTH: 2370
;; TYPE: DNA
;; ORGANISM: HOMO SAPIENS
;; FEATURE: FEATURE: MISCELLANEOUS FEATURE
;; NAME/KEY: UNSURE
;; LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)

LOCATION: (2349) (2351) (2354) (2358) (2368) (2369)
OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t
US-10-308-365-3

Alignment of: us-10-726-967a-1 x US-10-308-365-3 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	379
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
155 AGGAAGGGGTGGGGCAGCACCC

38
132

Sequence name: rnpb2ndb:US-10-829-717-3

Sequence documentation:

; Sequence 3, Application US/10829717
; Publication No. US20050101556A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OR INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/829, 717
; CURRENT FILING DATE: 2004-04-22
; PRIOR APPLICATION NUMBER: US/10/308, 365
; PRIOR FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694, 200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009, 191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 2370
; TYPE: DNA
; ORGANISM: HOMO SAPIENS
; FEATURE: FEATURE: MISCELLANEOUS FEATURE
; NAME/KEY: UNSURE
; LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)
; LOCATION: (2349) (2351) (2354) (2358) (2368) (2369)
; OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t
US-10-829-717-3

Alignment of: us-10-726-967a-1 x US-10-829-717-3 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	379
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
155 AGGAAGGGGTGGGGCAGCACCC

38
132

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OM of: us-10-726-967a-1 to: rn1p2ndb.* out_format : pfs
Date: Wed Aug 3 11:56:16 2005

About: Results were produced by the Gencore software, version 5.1.6,
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Command line parameters:
-MODE=frame+1.p2n.model -DRV=soft -Q=us-10-726-967a-1 -DB=rn1p2ndb -SUFFIX=pfs
-OUT=10726967-1_22-41vSID52hitst.p2n.rn1 -MINMATCH=0.1 -LODFCL=0 -LODFEXT=0
-UNITS=bits -START=22 -END=41 -MATRIX=blom62 -TRANS=human40.cdi -LIST=500
-DOCALLIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=500 -MODE=LOCAL
-OUTFMT=pfs -NOR=ext -HEADSIZE=500 -MINLEN=0 -MAXLEN=200000000 -NCPU=6
-NO_XLPHY -NEG SCORES=0 -LONGLOG -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FEAPOP=6
-FEAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOR=6 -DELEXT=7

Search information:
Query: us-10-726-967a-1
Query length: 20

Database: rn1p2ndb.*

Database sequences: 155

Search time (sec): 9

Score list:

Sequence	Strid	Orig	zScore	EScore	Len	Documentation	Application
rn1p2ndb:US-09-548-372D-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-548-367D-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-551-853D-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-416-901B-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-548-376D-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-794-927A-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-548-373D-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-785-847B-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-869-414-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-548-366F-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-548-368D-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-794-925A-50	+	104.00	62.74	32.17	1287	Sequence 50,	Application 50,
rn1p2ndb:US-09-548-372D-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-548-367D-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-551-853D-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-416-901B-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-548-376D-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-794-927A-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-548-373D-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-785-847B-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-869-414-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-548-366F-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-548-368D-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-794-925A-25	+	104.00	62.73	32.22	1302	Sequence 25,	Application 25,
rn1p2ndb:US-09-548-372D-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-548-367D-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-551-853D-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-416-901B-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-548-376D-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-794-927A-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-548-373D-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-785-847B-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-869-414-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-548-366F-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
rn1p2ndb:US-09-548-368D-52	+	104.00	62.73	32.23	1305	Sequence 52,	Application 52,
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rn1p2ndb:US-09-548-367D-21	+	104.00	62.70	32.34	1341	Sequence 21,	Application 21,
rn1p2ndb:US-09-551-853D-21	+	104.00	62.70	32.34	1341	Sequence 21,	Application 21,
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rn1p2ndb:US-09-794-925A-21	+	104.00	62.70	32.34	1341	Sequence 21,	Application 21,
rn1p2ndb:US-09-869-414A-21	+	104.00	62.70	32.34	1341	Sequence 21,	Application 21,
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rn1p2ndb:US-09-795-847B-23	+	104.00	62.66	32.47	1380	Sequence 23,	Application 23,
rn1p2ndb:US-09-869-414-23	+	104.00	62.66	32.47	1380	Sequence 23,	Application 23,
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rn1p2ndb:US-09-548-367D-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
rn1p2ndb:US-09-551-853D-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
rn1p2ndb:US-09-416-901B-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
rn1p2ndb:US-09-548-376D-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
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rn1p2ndb:US-09-548-373D-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
rn1p2ndb:US-09-785-847B-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
rn1p2ndb:US-09-869-414-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
rn1p2ndb:US-09-548-366F-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
rn1p2ndb:US-09-548-368D-3	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
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rn1p2ndb:US-09-785-847B-2	+	104.00	62.22	34.25	2070	Sequence 3,	Application 3,
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rn1p2nbd:US-09-949-016-4382 +	104.00	61.10	39.22	5855	Sequence 4382, Application US/
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      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
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Sequence name: rmlp2ndb:US-09-548-367D-50
Sequence documentation:
/ Sequence 50, Application US/09548367D
/ Patent No. 6440698
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREOF
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 28915/6280H
/ CURRENT APPLICATION NUMBER: US/09/548,367D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 50
/ LENGTH: 1287
/ TYPE: DNA
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Ap2(b) delta TM
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Sequence documentation:
; Sequence 50, Application US/09551853D
; Patent No. 650667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
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US-09-551-853D-50

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      Gaps: 0

Alignment:
22 ThrGlnHtsglyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGAGCAGGCGATCCGGCTGCTCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCGGGGGCGCTG 123

Sequence name: rnp2ndb:US-09-416-901B-50

Sequence documentation:
; Sequence 50, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
```

```
TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-416-901B-50

Alignment of: us-10-726-967a-1 x US-09-416-901B-50 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 32.2
      Matching length: 20      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHtsglyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGAGCAGGCGATCCGGCTGCTCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCGGGGGCGCTG 123

Sequence name: rnp2ndb:US-09-548-376D-50

Sequence documentation:
; Sequence 50, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aap2(b) delta TM
US-09-548-376D-50

Alignment of: us-10-726-967a-1 x US-09-548-376D-50 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 32.2
      Matching length: 20      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHtsglyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGAGCAGGCGATCCGGCTGCTCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
```

38 olenglyleu 41
114 CCGGGGCTG 123

Sequence name: rnp2ndb:US-09-794-927A-50

Sequence documentation:
; Sequence 50, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/62808
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-794-927A-50

Alignment of: us-10-726-967a-1 x US-09-794-927A-50 ..

Alignment segment 1/1: (+)

Matching	Quality:	Length:	Score:
Percent Similarity: 100.00	104.00	20	32.2
Total Percent Identity: 100.00		20	

Gaps: 0

Alignment:

22 ThrGlnHsGlyLeuArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACGCGATCGGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 113
38 olenglyleu 41
114 CCGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-373D-50

Sequence documentation:
; Sequence 50, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62808
; CURRENT APPLICATION NUMBER: US/09/548,373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-373D-50

Alignment of: us-10-726-967a-1 x US-09-548-373D-50 ..

Alignment segment 1/1: (+)

Matching	Quality:	Length:	Score:
Percent Similarity: 100.00	104.00	20	32.2
Total Percent Identity: 100.00		20	

Gaps: 0

Alignment:

22 ThrGlnHsGlyLeuArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACGCGATCGGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 113
38 olenglyleu 41
114 CCGGGGCTG 123

Sequence name: rnp2ndb:US-09-795-847B-50

Sequence documentation:

; Sequence 50, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van, Ridgand
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/62808
; CURRENT APPLICATION NUMBER: US/09/795,847B
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-795-847B-50

Alignment of: us-10-726-967a-1 x US-09-795-847B-50 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 32.2
Matching length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 Thrglnhsglylleargleuproleuargserglyleuglyglaapr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCCCGCAGCGCCTGGGGGGCGCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-869-414-50

Sequence documentation:

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; Sequence 50, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-09-869-414-50
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Alignment of: us-10-726-967a-1 x US-09-869-414-50 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 32.2
Matching length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 Thrglnhsglylleargleuproleuargserglyleuglyglaapr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCCCGCAGCGCCTGGGGGGCGCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-548-366F-50

Sequence documentation:

; Sequence 50, Application US/09548366F

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; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-366F-50
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Alignment of: us-10-726-967a-1 x US-09-548-366F-50 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 32.2
Matching length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 Thrglnhsglylleargleuproleuargserglyleuglyglaapr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCCCGCAGCGCCTGGGGGGCGCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-548-368D-50

Sequence documentation:

```
; Sequence 50, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
```


OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-548-368D-50

Alignment of: us-10-726-967a-1 x US-09-548-368D-50 ..

Alignment segment 1/1: (+)

Quality:	104.00	Bscore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-794-925A-50

Sequence documentation:

Sequence 50, Application US/09794925A
Patent No. 6828117
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280H
CURRENT APPLICATION NUMBER: US/09/794,925A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 50
LENGTH: 1287
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-794-925A-50

Alignment of: us-10-726-967a-1 x US-09-794-925A-50 ..

Alignment segment 1/1: (+)

Quality:	104.00	Bscore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
```

114 CTGGGGGCTG

123

Sequence name: rni2ndb:US-09-548-372D-25

Sequence documentation:

Sequence 25, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280I
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-372D-25

Alignment of: us-10-726-967a-1 x US-09-548-372D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Bscore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTGACGATGTAATTCGTCTGCACTGCGTACGCGTCTGGGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rni2ndb:US-09-548-367D-25

Sequence documentation:

Sequence 25, Application US/09548367D
Patent No. 6440698
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280H
CURRENT APPLICATION NUMBER: US/09/548,367D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25

LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-367D-25

Alignment of: us-10-726-967a-1 x US-09-548-367D-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTACGGCGTCTGGGTGCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rni2p2ndb:US-09-551-853D-25

Sequence documentation:

Sequence 25, Application US/09551853D
Patent No. 6500667
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280L
CURRENT APPLICATION NUMBER: US/09/551,853D
CURRENT FILING DATE: 2000-04-18
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-551-853D-25

Alignment of: us-10-726-967a-1 x US-09-551-853D-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTACGGCGTCTGGGTGCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rni2p2ndb:US-09-416-901B-25

Sequence documentation:

Sequence 25, Application US/09416901B
Patent No. 6699671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-416-901B-25

Alignment of: us-10-726-967a-1 x US-09-416-901B-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTACGGCGTCTGGGTGCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rni2p2ndb:US-09-548-376D-25

Sequence documentation:

Sequence 25, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302

TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-376D-25

Alignment of: us-10-726-967a-1 x US-09-548-376D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
4 ACTGACGATGGTATTGCTGTGCCACTGCGGTACGGTCTGGGTGGTCTCC 53
38 OleuGlyLeu
54 ACTGGGTCTG
41
63
```

Sequence name: rn1p2ndb:US-09-794-927A-25

Sequence documentation:

Sequence 25, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927A-25

Alignment of: us-10-726-967a-1 x US-09-794-927A-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
4 ACTGACGATGGTATTGCTGTGCCACTGCGGTACGGTCTGGGTGGTCTCC 53
38 OleuGlyLeu
54 ACTGGGTCTG
41
63
```

Sequence name: rn1p2ndb:US-09-548-373D-25

Sequence documentation:

Sequence 25, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280B
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-373D-25

Alignment of: us-10-726-967a-1 x US-09-548-373D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
4 ACTGACGATGGTATTGCTGTGCCACTGCGGTACGGTCTGGGTGGTCTCC 53
38 OleuGlyLeu
54 ACTGGGTCTG
41
63
```

Sequence name: rn1p2ndb:US-09-795-847B-25

Sequence documentation:

Sequence 25, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heintz, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280B
CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23

;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 25
;; LENGTH: 1302
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-795-847B-25

Alignment of: us-10-726-967a-1 x US-09-795-847B-25 ..

Alignment segment 1/1: (++)

Matching length:	104.00	Score:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrglnHlglytleargleupProleuArgSerglyLeuglyGlyAlaPr 38
|||||
4 ACTGAGCATGGTATTGCTGCTGCCACTGCGTACGCGTCTGGGTGCTCC 53
|||||
38 oleuglyLeu
|||||
54 ACTGGGTCTG 63
```

Sequence name: rn1p2ndb:US-09-869-414-25

Sequence documentation:
; Sequence 25, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-25

Alignment of: us-10-726-967a-1 x US-09-869-414-25 ..

Alignment segment 1/1: (++)

Matching length:	104.00	Score:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrglnHlglytleargleupProleuArgSerglyLeuglyGlyAlaPr 38
```

```
|||||
4 ACTGAGCATGGTATTGCTGCTGCCACTGCGTACGCGTCTGGGTGCTCC 53
|||||
38 oleuglyLeu
|||||
54 ACTGGGTCTG 63
```

Sequence name: rn1p2ndb:US-09-548-366F-25

Sequence documentation:

; Sequence 25, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-25

Alignment of: us-10-726-967a-1 x US-09-548-366F-25 ..

Alignment segment 1/1: (++)

Matching length:	104.00	Score:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrglnHlglytleargleupProleuArgSerglyLeuglyGlyAlaPr 38
|||||
4 ACTGAGCATGGTATTGCTGCTGCCACTGCGTACGCGTCTGGGTGCTCC 53
|||||
38 oleuglyLeu
|||||
54 ACTGGGTCTG 63
```

Sequence name: rn1p2ndb:US-09-548-368D-25

Sequence documentation:

; Sequence 25, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-368D-25

Alignment of: us-10-726-967a-1 x US-09-548-368D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTAGCGGTCTGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rnp2ndb:US-09-794-925A-25

Sequence documentation:

Sequence 25, Application US/09794925A
Patent No. 6828117
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280H1
CURRENT APPLICATION NUMBER: US/09/794,925A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925A-25

Alignment of: us-10-726-967a-1 x US-09-794-925A-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
```

```
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTAGCGGTCTGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rnp2ndb:US-09-806-194A-25

Sequence documentation:

Sequence 25, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P.CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-806-194A-25

Alignment of: us-10-726-967a-1 x US-09-806-194A-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTAGCGGTCTGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rnp2ndb:US-09-548-372D-52

Sequence documentation:

Sequence 52, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280I
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-372D-52

Alignment of: us-10-726-967a-1 x US-09-548-372D-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGCGCTGGGGGCGCCCC 113
38 oLeuGlyLeu
114 CCGGGGGCTG 41
123
```

Sequence name: rni2ndb:US-09-548-367D-52

Sequence documentation:
Sequence 52, Application US/09548367D
Patent No. 6440698
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280H
CURRENT APPLICATION NUMBER: US/09/548,367D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-367D-52

Alignment of: us-10-726-967a-1 x US-09-548-367D-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38

```
64 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGCGCTGGGGGCGCCCC 113
38 oLeuGlyLeu
114 CCGGGGGCTG 41
123
```

Sequence name: rni2ndb:US-09-551-853D-52

Sequence documentation:

Sequence 52, Application US/09551853D
Patent No. 6500667
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280L
CURRENT APPLICATION NUMBER: US/09/551,853D
CURRENT FILING DATE: 2000-04-18
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-551-853D-52

Alignment of: us-10-726-967a-1 x US-09-551-853D-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGCGCTGGGGGCGCCCC 113
38 oLeuGlyLeu
114 CCGGGGGCTG 41
123
```

Sequence name: rni2ndb:US-09-416-901B-52

Sequence documentation:

Sequence 52, Application US/09416901B
Patent No. 6699671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: PatentIn version 3.1
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-416-901B-52

Alignment of: us-10-726-967a-1 x US-09-416-901B-52 ..
Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	32.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 Thrglnhsglylleargleuproleuargserglyleuglygylalapr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGCTGGGGGGGCGCC 113
|||||
38 oleuglyleu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-548-376D-52

Sequence documentation:

Sequence 52, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GUNNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
TITLE OF INVENTION: AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280P
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-376D-52

Alignment of: us-10-726-967a-1 x US-09-548-376D-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	32.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 Thrglnhsglylleargleuproleuargserglyleuglygylalapr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGCTGGGGGGGCGCC 113
|||||
38 oleuglyleu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-794-927A-52

Sequence documentation:

Sequence 52, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gunney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-794-927A-52

Alignment of: us-10-726-967a-1 x US-09-794-927A-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	32.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 Thrglnhsglylleargleuproleuargserglyleuglygylalapr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGCTGGGGGGGCGCC 113
|||||
38 oleuglyleu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-548-373D-52

Sequence documentation:

Sequence 52, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GUNNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREOF

FILE REFERENCE: 29915/6280B
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-548-373D-52

Alignment of: us-10-726-967a-1 x US-09-548-373D-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 Thrglnh1sgly1leargleuproleuargserglyleugly1valapr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCCGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-795-847B-52

Sequence documentation:

Sequence 52, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heintz, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280B
CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence

FEATURE:
OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-795-847B-52

Alignment of: us-10-726-967a-1 x US-09-795-847B-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 Thrglnh1sgly1leargleuproleuargserglyleugly1valapr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCCGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-869-414-52

Sequence documentation:

Sequence 52, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Beinowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 52
LENGTH: 1305
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aep2(b)
OTHER INFORMATION: delta TM
US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 Thrglnh1sgly1leargleuproleuargserglyleugly1valapr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCCGCGCAGCGGCTGGGGGGCGCCCC 113
```


38 oLeuGlyLeu
|||||
114 CCGGGGCTG

41
123

Sequence name: rnp2ndb:US-09-548-366F-52

Sequence documentation:

; Sequence 52, Application US/09548366F
; Patent No. 6797487

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280J

; CURRENT APPLICATION NUMBER: US/09/548,366F

; PRIOR FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ. ID NOS: 73

; SOFTWARE: Patentin version 3.1

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Ap2 (b) delta TM

US-09-548-366F-52

Alignment of: us-10-726-967a-1 x US-09-548-366F-52

Alignment segment 1/1: (+)

Matching Length: 104.00 Total Length: 32.2
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHsGlyLeuArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||

64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
|||||

38 oLeuGlyLeu 41

114 CCGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-368D-52

Sequence documentation:

; Sequence 52, Application US/09548368D

; Patent No. 6825023

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280C

; CURRENT APPLICATION NUMBER: US/09/548,368D

; PRIOR FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ. ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Ap2 (b) delta TM

US-09-548-368D-52

Alignment of: us-10-726-967a-1 x US-09-548-368D-52

Alignment segment 1/1: (+)

Matching Length: 104.00 Total Length: 32.2
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHsGlyLeuArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||

64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
|||||

38 oLeuGlyLeu 41

114 CCGGGGCTG 123

Sequence name: rnp2ndb:US-09-794-925A-52

Sequence documentation:

; Sequence 52, Application US/09794925A

; Patent No. 6828117

; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280H1

; CURRENT APPLICATION NUMBER: US/09/794,925A

; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ. ID NOS: 74

; SOFTWARE: Patentin Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Ap2 (b) delta TM

US-09-794-925A-52

Alignment of: us-10-726-967a-1 x US-09-794-925A-52

Alignment segment 1/1: (+)

Matching Length: 104.00 Total Length: 32.2
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-372D-21

Sequence documentation:

```
; Sequence 21, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-372D-21
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-21 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	Score:	32.3
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
43 ACCGAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 92
|||||
38 OleuGlyLeu 41
|||||
93 CCTGGGGGCTG 102
```

Sequence name: rnp2ndb:US-09-548-367D-21

Sequence documentation:

```
; Sequence 21, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
```

```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-367D-21
```

Sequence name: us-10-726-967a-1 x US-09-548-367D-21 ..

Alignment of: us-10-726-967a-1 x US-09-548-367D-21 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	Score:	32.3
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
43 ACCGAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 92
|||||
38 OleuGlyLeu 41
|||||
93 CCTGGGGGCTG 102
```

Sequence name: rnp2ndb:US-09-551-853D-21

Sequence documentation:

```
; Sequence 21, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-551-853D-21
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-21 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	Score:	32.3
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGATCCGGCTGCGCCCTGCGACGCGGCTGCGGCGCCCC 92
38 OleuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rmp2ndb:US-09-416-901B-21

Sequence documentation:

; Sequence 21, Application US/09416901B
; Patent No. 669671

GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIORITY FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-416-901B-21

Alignment of: us-10-726-967a-1 x US-09-416-901B-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGATCCGGCTGCGCCCTGCGACGCGGCTGCGGCGCCCC 92
38 OleuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rmp2ndb:US-09-548-376D-21

Sequence documentation:

; Sequence 21, Application US/09548376D
; Patent No. 6706485

GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/548,376D
; PRIORITY FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-376D-21

Alignment of: us-10-726-967a-1 x US-09-548-376D-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
43 ACCGACGACGCGATCCGGCTGCGCCCTGCGACGCGGCTGCGGCGCCCC 92
38 OleuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rmp2ndb:US-09-794-927A-21

Sequence documentation:

; Sequence 21, Application US/09794927A
; Patent No. 6727074

GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIORITY FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-927A-21

Alignment of: us-10-726-967a-1 x US-09-794-927A-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
43 ACCCAGCAGCGCATCCGCTGCCCCCTGCGCAGCGCCTGCGGCGCGCCCC 92
38 OleuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rni2ndb:US-09-548-373D-21

Sequence documentation:

/ Sequence 21, Application US/09548373D

/ Patent No. 6737510

/ GENERAL INFORMATION:

/ APPLICANT: GURNEY ET AL.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

/ FILE REFERENCE: 29915/6280B

/ CURRENT FILING DATE: 2000-04-12

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: Patentin version 3.1

/ SEQ ID NO 21

/ LENGTH: 1341

/ TYPE: DNA

/ ORGANISM: Homo sapiens

US-09-548-373D-21

Alignment of: us-10-726-967a-1 x US-09-548-373D-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
43 ACCCAGCAGCGCATCCGCTGCCCCCTGCGCAGCGCCTGCGGCGCGCCCC 92
38 OleuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rni2ndb:US-09-795-847B-21

Sequence documentation:

/ Sequence 21, Application US/09795847B

/ Patent No. 6753163

/ GENERAL INFORMATION:

/ APPLICANT: GURNEY, Mark E.

/ APPLICANT: Bienkowski, Michael J.

/ APPLICANT: Heinriksen, Robert L.

/ APPLICANT: Parodi, Luis A.

/ APPLICANT: Van, Ridgand

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280B

/ CURRENT APPLICATION NUMBER: US/09/795,847B

/ CURRENT FILING DATE: 2001-02-28

/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 21
/ LENGTH: 1341
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-795-847B-21

Alignment of: us-10-726-967a-1 x US-09-795-847B-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
43 ACCCAGCAGCGCATCCGCTGCCCCCTGCGCAGCGCCTGCGGCGCGCCCC 92
38 OleuGlyLeu 41
93 CCTGGGGGCTG 102

Sequence name: rni2ndb:US-09-869-414-21

Sequence documentation:

/ Sequence 21, Application US/09869414

/ Patent No. 6790610

/ GENERAL INFORMATION:

/ APPLICANT: Bienkowski et al.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280B

/ CURRENT APPLICATION NUMBER: US/09/869,414

/ CURRENT FILING DATE: 2001-06-27

/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: Patentin Ver. 2.0

/ SEQ ID NO 21

/ LENGTH: 1341

/ TYPE: DNA

/ ORGANISM: Homo sapiens

US-09-869-414-21

Alignment of: us-10-726-967a-1 x US-09-869-414-21 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 32.3

Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 92
|||
38 OLeuGlyLeu 41
|||
93 CCTGGGGCTG 102

Sequence name: rnp2ndb:US-09-548-366F-21

Sequence documentation:

; Sequence 21, Application US/09548366F

; Patent No. 6797487

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280J

; CURRENT APPLICATION NUMBER: US/09/548,366F

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 21

; LENGTH: 1341

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-548-366F-21

Alignment of: us-10-726-967a-1 x US-09-548-366F-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.3
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 92
|||
38 OLeuGlyLeu 41
|||
93 CCTGGGGCTG 102

Sequence name: rnp2ndb:US-09-548-366D-21

Sequence documentation:

; Sequence 21, Application US/09548366D

; Patent No. 6825023

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280C

; CURRENT APPLICATION NUMBER: US/09/548,366D

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 21

; LENGTH: 1341

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-548-366D-21

Alignment of: us-10-726-967a-1 x US-09-548-366D-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.3
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 92
|||
38 OLeuGlyLeu 41
|||
93 CCTGGGGCTG 102

Sequence name: rnp2ndb:US-09-794-925A-21

Sequence documentation:

; Sequence 21, Application US/09794925A

; Patent No. 6828117

; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280H1

; CURRENT APPLICATION NUMBER: US/09/794,925A

; CURRENT FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 21

; LENGTH: 1341

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-794-925A-21

Alignment of: us-10-726-967a-1 x US-09-794-925A-21 ..

Alignment segment 1/1: (+)

Quality: 104.00

Bscore: 32.3

Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
43 ACCGAGACGGCATCCGGCTGCCCCCTCGCAGCGGCTGGGGGGCGCCCC 92
|||||
38 OleuGlyLeu 41
|||||
93 CCGGGGGCTG 102

Sequence name: rni2ndb:US-09-806-194A-21

Sequence documentation:

/ Sequence 21, Application US/09806194A
/ Patent No. 6835565
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177, P CP
/ CURRENT APPLICATION NUMBER: US/09/806,194A
/ PRIOR FILING DATE: 2001-09-17
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 21
/ LENGTH: 1341
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-806-194A-21

Alignment of: us-10-726-967a-1 x US-09-806-194A-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 32.3
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
43 ACCGAGACGGCATCCGGCTGCCCCCTCGCAGCGGCTGGGGGGCGCCCC 92
|||||
38 OleuGlyLeu 41
|||||
93 CCGGGGGCTG 102

Sequence name: rni2ndb:US-09-548-372D-29

Sequence documentation:

/ Sequence 29, Application US/09548372D
/ Patent No. 6420534
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/62801
/ CURRENT APPLICATION NUMBER: US/09/548,372D
/ PRIOR FILING DATE: 2000-04-12

/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patent In version 3.1
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-372D-29

Alignment of: us-10-726-967a-1 x US-09-548-372D-29 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGAGACGGCATCCGGCTGCCCCCTCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rni2ndb:US-09-548-367D-29

Sequence documentation:

/ Sequence 29, Application US/09548367D
/ Patent No. 6440698
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/62801
/ CURRENT APPLICATION NUMBER: US/09/548,367D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patent In version 3.1
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-367D-29

Alignment of: us-10-726-967a-1 x US-09-548-367D-29 ..

Alignment segment 1/1: (+)

Quality: 104.00 EScore: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCCAGCGGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rmp2ndb:US-09-551-853D-29

Sequence documentation:

Sequence 29, Application US/09551853D
Patent No. 6500667
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280L
CURRENT APPLICATION NUMBER: US/09/551,853D
CURRENT FILING DATE: 2000-04-18
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-551-853D-29

Alignment of: us-10-726-967a-1 x US-09-551-853D-29 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCCAGCGGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rmp2ndb:US-09-416-901B-29

Sequence documentation:

Sequence 29, Application US/09416901B
Patent No. 6693671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: Patentin version 3.1
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-416-901B-29

Alignment of: us-10-726-967a-1 x US-09-416-901B-29 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCCAGCGGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rmp2ndb:US-09-548-376D-29

Sequence documentation:

Sequence 29, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-376D-29

Alignment of: us-10-726-967a-1 x US-09-548-376D-29 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGGCATCCGGCTGCCCTGCGACGGCGCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-794-927A-29

Sequence documentation:

```
; Sequence 29, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-927A-29
```

Sequence of: us-10-726-967a-1 x US-09-794-927A-29 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGGCATCCGGCTGCCCTGCGACGGCGCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-548-373D-29

Sequence documentation:

```
; Sequence 29, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
```

```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-373D-29
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-29 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGGCATCCGGCTGCCCTGCGACGGCGCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-795-847B-29

Sequence documentation:

```
; Sequence 29, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van Rigan
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-795-847B-29
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-29 ..

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACACGGCATCCGGCTGCCCTCGCGACAGCGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CTTGGGGGCTG 123

Sequence name: rnp2ndb:US-09-869-414-29

Sequence documentation:

Sequence 29, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Beinikowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-29

Alignment of: us-10-726-967a-1 x US-09-869-414-29

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACACGGCATCCGGCTGCCCTCGCGACAGCGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CTTGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-366F-29

Sequence documentation:

Sequence 29, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280J
CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366F-29

Alignment of: us-10-726-967a-1 x US-09-548-366F-29

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACACGGCATCCGGCTGCCCTCGCGACAGCGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CTTGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-368D-29

Sequence documentation:

Sequence 29, Application US/09548368D
Patent No. 6825023
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES THEREOF
FILE REFERENCE: 29915/6280C
CURRENT APPLICATION NUMBER: US/09/548,368D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 29
LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-368D-29

Alignment of: us-10-726-967a-1 x US-09-548-368D-29

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment of: us-10-726-967a-1 x US-09-548-368D-29

Alignment segment 1/1: (+)

Quality: 104.00 Score: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCGCCCTGCGCAGCGGCTGAGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-794-925A-29

Sequence documentation:

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/ Sequence 29, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-925A-29
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-29 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCGCCCTGCGCAGCGGCTGAGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-806-194A-29

Sequence documentation:

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/ Sequence 29, Application US/09806194A
/ Patent No. 6835565
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
```

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/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
```

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/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177.P CP
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/ CURRENT APPLICATION NUMBER: US/09/806,194A
```

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/ PRIOR FILING DATE: 2001-09-17
```

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/ PRIOR APPLICATION NUMBER: 60/101,594
```

```
/ PRIOR FILING DATE: 1998-09-24
```

```
/ NUMBER OF SEQ ID NOS: 49
```

```
/ SOFTWARE: PatentIn Ver. 2.0
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```
/ SEQ ID NO 29
```

```
/ LENGTH: 1362
```

```
/ TYPE: DNA
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/ ORGANISM: Homo sapiens
```

```
/ US-09-806-194A-29
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Alignment of: us-10-726-967a-1 x US-09-806-194A-29 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 32.4
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCGCCCTGCGCAGCGGCTGAGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-548-372D-23

Sequence documentation:

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/ Sequence 23, Application US/09548372D
/ Patent No. 6420534
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280I
/ CURRENT APPLICATION NUMBER: US/09/548,372D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-548-372D-23
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-23 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 32.5
Matching length: 20 Total length: 20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
82 ACCGAGCAGCGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCCCC 131
38 OleuGlyLeu
132 CCTGGGGCTG 41
141
```

Sequence name: rnp2ndb:US-09-548-372D-31

Sequence documentation:

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; Sequence 31, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-372D-31
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Alignment of: us-10-726-967a-1 x US-09-548-372D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.5
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCCCC 113
38 OleuGlyLeu
114 CCTGGGGCTG 41
123
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Sequence name: rnp2ndb:US-09-548-367D-23

Sequence documentation:

```
; Sequence 23, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
```

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; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-367D-23
```

Alignment of: us-10-726-967a-1 x US-09-548-367D-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.5
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
82 ACCGAGCAGCGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCCCC 131
38 OleuGlyLeu
132 CCTGGGGCTG 41
141
```

Sequence name: rnp2ndb:US-09-548-367D-31

Sequence documentation:

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; Sequence 31, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-367D-31
```

Alignment of: us-10-726-967a-1 x US-09-548-367D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.5
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-551-853D-23

Sequence documentation:

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; Sequence 23, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-551-853D-23
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
82 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 131
38 OleuGlyLeu 41
132 CCTGGGGGCTG 141
```

Sequence name: rni2ndb:US-09-551-853D-31

Sequence documentation:

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; Sequence 31, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
```

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn version 3.1

SEQ ID NO 31

LENGTH: 1380

TYPE: DNA

ORGANISM: Homo sapiens

US-09-551-853D-31

Alignment of: us-10-726-967a-1 x US-09-551-853D-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-416-901B-23

Sequence documentation:

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; Sequence 23, Application US/09416901B
; Patent No. 669671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-416-901B-23
```

Alignment of: us-10-726-967a-1 x US-09-416-901B-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuAlaGSerGlyLeuGlyAlaAlaPr 38
|||
82 ACCGAGCAGCGCATCCGCTGCCCTGCAGCGGCGCTGGGGGCGCCCC 131
|||
38 OleuGlyLeu 41
|||
132 CCTGGGGGCTG 141

Sequence name: rnp2ndb:US-09-416-901B-31

Sequence documentation:

Sequence 31. Application US/09416901B
Patent No. 6699671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: PatentIn version 3.1
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-416-901B-31

Alignment of: us-10-726-967a-1 x US-09-416-901B-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Basecore:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuAlaGSerGlyLeuGlyAlaAlaPr 38
|||
64 ACCGAGCAGCGCATCCGCTGCCCTGCAGCGGCGCTGGGGGCGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCTGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-376D-23

Sequence documentation:

Sequence 23. Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
TITLE OF INVENTION: AND USES
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn version 3.1

SEQ ID NO 23

LENGTH: 1380

TYPE: DNA

ORGANISM: Homo sapiens

US-09-548-376D-23

Alignment of: us-10-726-967a-1 x US-09-548-376D-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Basecore:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuAlaGSerGlyLeuGlyAlaAlaPr 38
|||
82 ACCGAGCAGCGCATCCGCTGCCCTGCAGCGGCGCTGGGGGCGCCCC 131
|||
38 OleuGlyLeu 41
|||
132 CCTGGGGGCTG 141

Sequence name: rnp2ndb:US-09-548-376D-31

Sequence documentation:

Sequence 31. Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
TITLE OF INVENTION: AND USES
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-376D-31

Alignment of: us-10-726-967a-1 x US-09-548-376D-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Basecore:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||
64 ACCGAGACGGCATCCGGCTGCGCCCTGCGCAGCGGGCTGGGGGCGCCCC 113
38 oLeuGlyLeu 41
|||
114 CCTGGGGCTG 123

Sequence name: rni2ndb:US-09-794-927A-23

Sequence documentation:

Sequence 23, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280FG
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: US/09/794,927A
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927A-23

Alignment of: us-10-726-967A-1 x US-09-794-927A-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||
82 ACCGAGACGGCATCCGGCTGCGCCCTGCGCAGCGGGCTGGGGGCGCCCC 131
38 oLeuGlyLeu 41
|||
132 CCTGGGGCTG 141

Sequence name: rni2ndb:US-09-794-927A-31

Sequence documentation:

Sequence 31, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280FG
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: US/09/794,927A
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927A-31

PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927A-31

Alignment of: us-10-726-967A-1 x US-09-794-927A-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||
64 ACCGAGACGGCATCCGGCTGCGCCCTGCGCAGCGGGCTGGGGGCGCCCC 113
38 oLeuGlyLeu 41
|||
114 CCTGGGGCTG 123

Sequence name: rni2ndb:US-09-548-373D-23

Sequence documentation:

Sequence 23, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280B
CURRENT FILING DATE: US/09/548,373D
PRIOR APPLICATION NUMBER: US/09/548,373D
PRIOR FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-373D-23

Alignment of: us-10-726-967A-1 x US-09-548-373D-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
82 ACCGACGACGGCATCCGGCTGCCCTCGGCAGACGGGCTCGGGGGGGCCCC 131
|||
38 OleuGlyLeu 41
|||
132 CTGGGGGGCTG 141
```

Sequence name: rnp2ndb:US-09-548-373D-31

Sequence documentation:

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; Sequence 31, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-373D-31
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTCGGCAGACGGGCTCGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CTGGGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-795-847B-23

Sequence documentation:

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; Sequence 23, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Helenikson, Michael J.
; APPLICANT: Helenikson, Robert L.
; APPLICANT: Yan, Riqiang
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
```

FILE REFERENCE: 28341/6280DE

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; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847B-23
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
82 ACCGACGACGGCATCCGGCTGCCCTCGGCAGACGGGCTCGGGGGGGCCCC 131
|||
38 OleuGlyLeu 41
|||
132 CTGGGGGGCTG 141
```

Sequence name: rnp2ndb:US-09-795-847B-31

Sequence documentation:

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; Sequence 31, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Helenikson, Michael J.
; APPLICANT: Helenikson, Robert L.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
```

US-09-795-847B-31

Alignment of: us-10-726-967a-1 x US-09-795-847B-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-869-414-23

Sequence documentation:

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/ Sequence 23, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-869-414-23
```

Alignment of: us-10-726-967a-1 x US-09-869-414-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
82 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 131
|||||
38 oleuGlyLeu 41
|||||
132 CTTGGGGCTG 141
```

Sequence name: rn1p2ndb:US-09-869-414-31

Sequence documentation:

```
/ Sequence 31, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 31
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-869-414-31
```

Alignment of: us-10-726-967a-1 x US-09-869-414-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-548-366F-23

Sequence documentation:

```
/ Sequence 23, Application US/09548366F
/ Patent No. 6797467
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280J
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 23
/ LENGTH: 1380
```


TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366F-23

Alignment of: us-10-726-967a-1 x US-09-548-366F-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
82 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGGCTGGGGGGCGCCCC 131
38 olenuGlyLeu 41
132 CCTGGGGGCTG 141

Sequence name: rnp2ndb:US-09-548-366F-31

Sequence documentation:

Sequence 31, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280J
CURRENT FILING DATE: US/09/548,366F
CURRENT APPLICATION NUMBER: US/00-04-12
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366F-31

Alignment of: us-10-726-967a-1 x US-09-548-366F-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGGCTGGGGGGCGCCCC 113
38 olenuGlyLeu 41
114 CCTGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-368D-23

Sequence documentation:
Sequence 23, Application US/09548368D
Patent No. 6825023
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280C
CURRENT FILING DATE: US/09/548,368D
CURRENT APPLICATION NUMBER: US/00-04-12
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 23
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-368D-23

Alignment of: us-10-726-967a-1 x US-09-548-368D-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
82 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGGCTGGGGGGCGCCCC 131
38 olenuGlyLeu 41
132 CCTGGGGGCTG 141

Sequence name: rnp2ndb:US-09-548-368D-31

Sequence documentation:

Sequence 31, Application US/09548368D
Patent No. 6825023
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280C
CURRENT FILING DATE: US/09/548,368D
CURRENT APPLICATION NUMBER: US/00-04-12
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 31
LENGTH: 1380
TYPE: DNA
ORGANISM: Homo sapiens

US-09-548-368D-31

Alignment of: us-10-726-967a-1 x US-09-548-368D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	32.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGLYILEARGLLEUPROLEUARGSERGLYLEUGLYGLYALAPR 38
|||||
64 ACCCAGCAGCGCATCCGGCTGCTGCCGACGCGGCTGGGGGGCGCCCC 113
|||||
38 OLEUGLYLEU 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-794-925A-23

Sequence documentation:

```
/ Sequence 23, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-925A-23
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	32.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGLYILEARGLLEUPROLEUARGSERGLYLEUGLYGLYALAPR 38
|||||
82 ACCCAGCAGCGCATCCGGCTGCTGCCGACGCGGCTGGGGGGCGCCCC 131
|||||
38 OLEUGLYLEU 41
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rn1p2ndb:US-09-794-925A-31

Sequence documentation:

```
/ Sequence 31, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 31
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-925A-31
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	32.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGLYILEARGLLEUPROLEUARGSERGLYLEUGLYGLYALAPR 38
|||||
64 ACCCAGCAGCGCATCCGGCTGCTGCCGACGCGGCTGGGGGGCGCCCC 113
|||||
38 OLEUGLYLEU 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-806-194A-23

Sequence documentation:

```
/ Sequence 23, Application US/09806194A
/ Patent No. 683565
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177.P CP
/ CURRENT APPLICATION NUMBER: US/09/806,194A
/ PRIOR FILING DATE: 2001-09-17
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
```

US-09-806-194A-23

Alignment of: us-10-726-967a-1 x US-09-806-194A-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYVALAPR 38
|||||
82 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGGCTGGGGGGGCCCC 131
|||||
38 OLeuGLYLeu
|||||
132 CCTGGGGCTG 141
```

Sequence name: rnp2ndb:US-09-806-194A-31

Sequence documentation:

```
; Sequence 31, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177, P. CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; PRIOR FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-806-194A-31
```

Alignment of: us-10-726-967a-1 x US-09-806-194A-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYVALAPR 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGGCTGGGGGGGCCCC 113
|||||
38 OLeuGLYLeu
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-724-566A-1

Sequence documentation:

```
; Sequence 1, Application US/09724566A
; Patent No. 6627739
```

GENERAL INFORMATION:

```
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guripal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NMWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-724-566A-1
```

Alignment of: us-10-726-967a-1 x US-09-724-566A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	32.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYVALAPR 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGGCTGGGGGGGCCCC 113
|||||
38 OLeuGLYLeu
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-471-669A-1

Sequence documentation:

```
; Sequence 1, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guripal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Erian Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; CURRENT FILING DATE: 1999-12-24
```

;; PRIOR APPLICATION NUMBER: US 60/114,408
;; PRIOR FILING DATE: 1998-12-31
;; PRIOR APPLICATION NUMBER: US 60/119,571
;; PRIOR FILING DATE: 1999-02-10
;; PRIOR APPLICATION NUMBER: US 60/139,172
;; PRIOR FILING DATE: 1999-06-15
;; NUMBER OF SEQ ID NOS: 108
;; SOFTWARE: Patent Ver. 2.1
;; SEQ ID NO 1
;; LENGTH: 1503
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-471-669A-1

Alignment of: us-10-726-967a-1 x US-09-471-669A-1 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	32.8
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCGCTCGGGGGGCGCCCC 113
38 OleuGlyLeu
|||||
114 CCTGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-548-372D-5

Sequence documentation:

;; Sequence 5, Application US/09548372D
;; Patent No. 6420534
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; TITLE OF INVENTION: THEREOF
;; FILE REFERENCE: 29915/62801
;; CURRENT APPLICATION NUMBER: US/09/548,372D
;; PRIOR FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: Patent version 3.1
;; SEQ ID NO 5
;; LENGTH: 1977
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-548-372D-5

Alignment of: us-10-726-967a-1 x US-09-548-372D-5 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	34
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCGCTCGGGGGGCGCCCC 113
38 OleuGlyLeu
|||||
114 CCTGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-548-367D-5

Sequence documentation:

;; Sequence 5, Application US/09548367D
;; Patent No. 6440698
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; TITLE OF INVENTION: THEREOF
;; FILE REFERENCE: 29915/62801
;; CURRENT APPLICATION NUMBER: US/09/548,367D
;; PRIOR FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: Patent version 3.1
;; SEQ ID NO 5
;; LENGTH: 1977
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-548-367D-5

Alignment of: us-10-726-967a-1 x US-09-548-367D-5 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	34
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGGCTGCCCTGCCGACGCGCGCTCGGGGGGCGCCCC 113
38 OleuGlyLeu
|||||
114 CCTGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-551-853D-5

Sequence documentation:

;; Sequence 5, Application US/09551853D
;; Patent No. 6500667
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; TITLE OF INVENTION: THEREOF
;; FILE REFERENCE: 29915/62801
;; CURRENT APPLICATION NUMBER: US/09/551,853D
;; PRIOR FILING DATE: 2000-04-18
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-551-853D-5

Alignment of: us-10-726-967a-1 x US-09-551-853D-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGCGGCGCGCC 113
|||||
38 OleuGLYleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmp2ndb:US-09-416-901B-5

Sequence documentation:

Sequence 5, Application US/09416901B
Patent No. 6699671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: PatentIn version 3.1
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-416-901B-5

Alignment of: us-10-726-967a-1 x US-09-416-901B-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
```

```
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGCGGCGCGCC 113
|||||
38 OleuGLYleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmp2ndb:US-09-548-376D-5

Sequence documentation:

Sequence 5, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-376D-5

Alignment of: us-10-726-967a-1 x US-09-548-376D-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGCGGCGCGCC 113
|||||
38 OleuGLYleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmp2ndb:US-09-794-927A-5

Sequence documentation:

Sequence 5, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133

;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 5
;; LENGTH: 1977
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-794-927A-5

Alignment of: us-10-726-967a-1 x US-09-794-927A-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHieGlylleArgLeuProLeuArgSerGlyLeuGlyAlaLpr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-548-373D-5

Sequence documentation:

;; Sequence 5, Application US/09548373D
;; Patent No. 6737510
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; FILE REFERENCE: 28915/6280B
;; CURRENT APPLICATION NUMBER: US/09/548,373D
;; CURRENT FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 5
;; LENGTH: 1977
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-548-373D-5

Alignment of: us-10-726-967a-1 x US-09-548-373D-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHieGlylleArgLeuProLeuArgSerGlyLeuGlyAlaLpr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-795-847B-5

Sequence documentation:

;; Sequence 5, Application US/09795847B
;; Patent No. 6753163
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinriksen, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Ridiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; FILE REFERENCE: 28341/6280E
;; CURRENT APPLICATION NUMBER: US/09/795,847B
;; CURRENT FILING DATE: 2001-02-28
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 5
;; LENGTH: 1977
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-795-847B-5

Alignment of: us-10-726-967a-1 x US-09-795-847B-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHieGlylleArgLeuProLeuArgSerGlyLeuGlyAlaLpr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-869-414-5

Sequence documentation:

;; Sequence 5, Application US/09869414
;; Patent No. 6790610
;; GENERAL INFORMATION:
;; APPLICANT: Beinowski et al.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; FILE REFERENCE: 28341/6280M
;; CURRENT APPLICATION NUMBER: US/09/869,414

CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-5

Alignment of: us-10-726-967a-1 x US-09-869-414-5 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity:	104.00	20	Matching	Percent Identity:	100.00	20
Total	Percent Similarity:	100.00	0	Total	Percent Identity:	100.00	0

Gaps: 0

Alignment:

22 ThrGlnHISGLYILEArgLeuProLeuArgSerGlyLeuGlyVALApr 38
|||||
64 ACCCAGCAGCGCATCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-366F-5

Sequence documentation:

; Sequence 5, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-5

Alignment of: us-10-726-967a-1 x US-09-548-366F-5 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity:	104.00	20	Matching	Percent Identity:	100.00	20
Total	Percent Similarity:	100.00	0	Total	Percent Identity:	100.00	0

Gaps: 0

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00

Alignment:

22 ThrGlnHISGLYILEArgLeuProLeuArgSerGlyLeuGlyVALApr 38
|||||
64 ACCCAGCAGCGCATCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-368D-5

Sequence documentation:

; Sequence 5, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-5

Alignment of: us-10-726-967a-1 x US-09-548-368D-5 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity:	104.00	20	Matching	Percent Identity:	100.00	20
Total	Percent Similarity:	100.00	0	Total	Percent Identity:	100.00	0

Gaps: 0

Alignment:

22 ThrGlnHISGLYILEArgLeuProLeuArgSerGlyLeuGlyVALApr 38
|||||
64 ACCCAGCAGCGCATCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rnp2ndb:US-09-794-925A-5

Sequence documentation:

; Sequence 5, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A

CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925A-5

Alignment of: us-10-726-967a-1 x US-09-794-925A-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACGACGGGATCCGGCTGCGCCCTGCGCAGCGGCTGCGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-806-194A-5

Sequence documentation:

Sequence 5, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177, P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
PRIOR FILING DATE: 2001-09-17
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-806-194A-5

Alignment of: us-10-726-967a-1 x US-09-806-194A-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACGACGGGATCCGGCTGCGCCCTGCGCAGCGGCTGCGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-548-372D-3

Sequence documentation:

Sequence 3, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-372D-3

Alignment of: us-10-726-967a-1 x US-09-548-372D-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACGACGGGATCCGGCTGCGCCCTGCGCAGCGGCTGCGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-548-367D-3

Sequence documentation:

Sequence 3, Application US/09548367D
Patent No. 6440698
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,367D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-367D-3

Alignment of: us-10-726-967a-1 x US-09-548-367D-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Bscore:	34.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGGATCCGGCTGCTGCGGAGCGGCTGGGGGGGCCCC 113
38 oLeuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rnp2ndb:US-09-551-853D-3

Sequence documentation:

Sequence 3, Application US/09551853D
Patent No. 6500667
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280L
CURRENT APPLICATION NUMBER: US/09/551,853D
PRIOR FILING DATE: 2000-04-18
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-551-853D-3

Alignment of: us-10-726-967a-1 x US-09-551-853D-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Bscore:	34.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGGATCCGGCTGCTGCGGAGCGGCTGGGGGGGCCCC 113
38 oLeuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rnp2ndb:US-09-416-901B-3

Sequence documentation:

Sequence 3, Application US/09416901B
Patent No. 6698671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-416-901B-3

Alignment of: us-10-726-967a-1 x US-09-416-901B-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Bscore:	34.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGGATCCGGCTGCTGCGGAGCGGCTGGGGGGGCCCC 113
38 oLeuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rnp2ndb:US-09-548-376D-3

Sequence documentation:

Sequence 3, Application US/09548376D
Patent No. 6705485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
PRIOR FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23

;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-376D-3

Alignment of: us-10-726-967a-1 x US-09-548-376D-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHieGly11eArGleuPProleuArGserGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGCGCTGGGGGGCCCC 113
38 oLeuGlyLeu
|||||
114 CCGGGGGCTG
123
```

Sequence name: rn1p2ndb:US-09-794-927A-3

Sequence documentation:

;; Sequence 3, Application US/09794927A
;; Patent No. 6727074
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280FG
;; CURRENT APPLICATION NUMBER: US/09/794,927A
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927A-3

Alignment of: us-10-726-967a-1 x US-09-794-927A-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHieGly11eArGleuPProleuArGserGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGCGCTGGGGGGCCCC 113
38 oLeuGlyLeu
|||||
114 CCGGGGGCTG
123
```

Sequence name: rn1p2ndb:US-09-548-373D-3

Sequence documentation:

;; Sequence 3, Application US/09548373D
;; Patent No. 6737510
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; FILE REFERENCE: 29915/6280B
;; CURRENT APPLICATION NUMBER: US/09/548,373D
;; PRIOR FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-373D-3

Alignment of: us-10-726-967a-1 x US-09-548-373D-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHieGly11eArGleuPProleuArGserGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGCGCTGGGGGGCCCC 113
38 oLeuGlyLeu
|||||
114 CCGGGGGCTG
123
```

Sequence name: rn1p2ndb:US-09-795-847B-3

Sequence documentation:

;; Sequence 3, Application US/09795847B
;; Patent No. 6753163
;; GENERAL INFORMATION:
;; APPLICANT: Gurney, Mark E.
;; APPLICANT: Bienkowski, Michael J.
;; APPLICANT: Heinrichson, Robert L.
;; APPLICANT: Parodi, Luis A.
;; APPLICANT: Yan, Riqiang
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
;; FILE REFERENCE: 28341/6280DE

CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847B-3

Alignment of: us-10-726-967a-1 x US-09-795-847B-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
38 oLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-869-414-3

Sequence documentation:
Sequence 3, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Beinkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-3

Alignment of: us-10-726-967a-1 x US-09-869-414-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
38 oLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-366F-3

Sequence documentation:
Sequence 3, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 28915/6280J
CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366F-3

Alignment of: us-10-726-967a-1 x US-09-548-366F-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCGACAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
38 oLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-368D-3

Sequence documentation:
Sequence 3, Application US/09548368D
Patent No. 6825023
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280C
CURRENT APPLICATION NUMBER: US/09/548,368D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-368D-3

Alignment of: us-10-726-967a-1 x US-09-548-368D-3 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	34.2
Percent	Length:	20	Length:	20
Similarity:	100.00	Matching	Percent	Identity:
100.00	0	Similarity:	100.00	100.00
Total Percent Identity: 100.00				

Alignment:

```
22 ThrglnHieglYlIeArGleuProleuArgserGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 olenuGlyLeu
|||||
114 CCTGGGGGCTG 41
123
```

Sequence name: rmlp2ndb:US-09-794-925A-3

Sequence documentation:

Sequence 3, Application US/09794925A
Patent No. 6828117
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280H1
CURRENT APPLICATION NUMBER: US/09/794,925A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925A-3

Alignment of: us-10-726-967a-1 x US-09-794-925A-3 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	34.2
Percent <td>Length:</td> <td>20</td> <td>Length:</td> <td>20</td>	Length:	20	Length:	20
Similarity:	100.00	Matching	Percent	Identity:
100.00	0	Similarity:	100.00	100.00
Total Percent Identity: 100.00				

Alignment:

```
22 ThrglnHieglYlIeArGleuProleuArgserGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 olenuGlyLeu
|||||
114 CCTGGGGGCTG 41
123
```

Sequence name: rmlp2ndb:US-09-806-194A-3

Sequence documentation:

Sequence 3, Application US/09806194A
Patent No. 683565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikeon, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 3
LENGTH: 2070
TYPE: DNA
ORGANISM: Homo sapiens
US-09-806-194A-3

Alignment of: us-10-726-967a-1 x US-09-806-194A-3 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	34.2
Percent <td>Length:</td> <td>20</td> <td>Length:</td> <td>20</td>	Length:	20	Length:	20
Similarity:	100.00	Matching	Percent	Identity:
100.00	0	Similarity:	100.00	100.00
Total Percent Identity: 100.00				

Alignment:

```
22 ThrglnHieglYlIeArGleuProleuArgserGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 olenuGlyLeu
|||||
114 CCTGGGGGCTG 41
123
```

Sequence name: rmlp2ndb:US-09-724-566A-42

Sequence documentation:

Sequence 42, Application US/09724566A
Patent No. 6627739
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Baal, Guribdal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6627739mand

APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
FILE REFERENCE: 228-US-NEMC2
CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 43
LENGTH: 2348
TYPE: DNA
ORGANISM: Homo sapiens
US-09-724-566A-42

Alignment of: us-10-726-967a-1 x US-09-724-566A-42 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Base:	34.8
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
369 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGGGGCCCC 418
|||
38 OLeuGlyLeu 41
|||
419 CCTGGGGCTG 428

Sequence name: rnp2ndb:US-09-724-566A-44

Sequence documentation:

Patent No. 6627739
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Basl, Guripdal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6627739mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
FILE REFERENCE: 228-US-NEMC2
CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172

PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 44
LENGTH: 2348
TYPE: DNA
ORGANISM: Homo sapiens
US-09-724-566A-44

Alignment of: us-10-726-967a-1 x US-09-724-566A-44 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Base:	34.8
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
369 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGGGGCCCC 418
|||
38 OLeuGlyLeu 41
|||
419 CCTGGGGCTG 428

Sequence name: rnp2ndb:US-09-471-669A-42

Sequence documentation:

Patent No. 6830918
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Basl, Guripdal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6830918mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
CURRENT APPLICATION NUMBER: US/09/471,669A
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: US 60/114,408
PRIOR FILING DATE: 1998-12-31
PRIOR APPLICATION NUMBER: US 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 42
LENGTH: 2348
TYPE: DNA
ORGANISM: Homo sapiens
US-09-471-669A-42

Alignment of: us-10-726-967a-1 x US-09-471-669A-42 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Base:	34.8
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment: Gaps: 0

22 ThGlnHISGly11LeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
369 ACCGACGACGGGATCCGGCTGCCCTGCGACGGGCTGGGGGGCGCC 418
38 oLeuGlyLeu 41
419 CCGGGGCTG 428

Sequence name: rmlp2ndb:US-09-471-669A-44

Sequence documentation:

; Sequence 44, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baer, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Elan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT FILING DATE: 1999-12-24
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 44
; LENGTH: 2348
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-471-669A-44

Alignment of: us-10-726-967a-1 x US-09-471-669A-44 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.8
Matching Length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThGlnHISGly11LeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
369 ACCGACGACGGGATCCGGCTGCCCTGCGACGGGCTGGGGGGCGCC 418
38 oLeuGlyLeu 41
419 CCGGGGCTG 428

Sequence name: rmlp2ndb:US-09-009-191-1

Sequence documentation:

; Sequence 1, Application US/09009191
; Patent No. 6319689

GENERAL INFORMATION:

; APPLICANT: POWELL, DAVID
; APPLICANT: CHAPMAN, CONRAD
; APPLICANT: MURPHY, KAY
; APPLICANT: SMITH, TRUDI
; TITLE OF INVENTION: ASP2
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: RATNER & PRESTIA
; STREET: P.O. BOX 980
; CITY: VALLEY FORGE
; STATE: PA
; COUNTRY: USA
; ZIP: 19482
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FASTSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; FILING DATE: 20-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 9701684.4
; FILING DATE: 28-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: PRESTIA, PAUL F
; REGISTRATION NUMBER: 23,031
; REFERENCE/DOCKET NUMBER: GH-70368
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 610-407-0700
; TELEFAX: 610-407-0701
; TRIEKX: 846169
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2541 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
US-09-009-191-1

Alignment of: us-10-726-967a-1 x US-09-009-191-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.2
Matching Length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThGlnHISGly11LeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGGATCCGGCTGCCCTGCGACGGGCTGGGGGGCGCC 113
38 oLeuGlyLeu 41
114 CCGGGGCTG 123

Sequence name: rmlp2ndb:US-09-604-608-1

Sequence documentation:

; Sequence 1, Application US/09604608
; Patent No. 6545127
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Lin, Xinli
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods

TITLE OF INVENTION: of Use Thereof
FILE REFERENCE: OMRP 179
CURRENT APPLICATION NUMBER: US/09/604,608
CURRENT FILING DATE: 2000-06-27
PRIOR APPLICATION NUMBER: 60/141,363
PRIOR FILING DATE: 1999-06-28
PRIOR APPLICATION NUMBER: 60/168,060
PRIOR FILING DATE: 1999-11-30
PRIOR APPLICATION NUMBER: 60/177,836
PRIOR FILING DATE: 2000-01-25
PRIOR APPLICATION NUMBER: 60/178,368
PRIOR FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: 60/210,292
PRIOR FILING DATE: 2000-06-08
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 1
LENGTH: 3252
TYPE: DNA
ORGANISM: Homo sapiens
US-09-604-608-1

Alignment of: us-10-726-967a-1 x US-09-604-608-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
25 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rnp2ndb:US-09-949-016-4382

Sequence documentation:

Sequence 4382, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: C1001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 4382
LENGTH: 5825
TYPE: DNA
ORGANISM: Human
US-09-949-016-4382

Alignment of: us-10-726-967a-1 x US-09-949-016-4382 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 39.2

Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
515 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 564
|||||
38 OleuGlyLeu 41
|||||
565 CCTGGGGGCTG 574
```

Sequence name: rnp2ndb:US-09-949-016-939

Sequence documentation:

Sequence 939, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: C1001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 939
LENGTH: 5878
TYPE: DNA
ORGANISM: Human
US-09-949-016-939

Alignment of: us-10-726-967a-1 x US-09-949-016-939 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	39.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
518 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 567
|||||
38 OleuGlyLeu 41
|||||
568 CCTGGGGGCTG 577
```

Sequence name: rnp2ndb:US-09-724-566a-48

Sequence documentation:

Sequence 48, Application US/09724566A
Patent No. 6627739
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Basi, Guripal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6627739mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael

```

; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Wang, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 48
; LENGTH: 16080
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Expression Vector pCEK
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(16080)
; OTHER INFORMATION: n = A,T,C or G
US-09-724-566A-48

```

Alignment of: us-10-726-967a-1 x US-09-724-566A-48 ..

```

Alignment segment 1/1: (+)
      Matching length: 104.00      Total length: 44.7
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

```

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
1738 ACCGACGACGGCATCCGCTGCCCTGCGACGCGCTGGGGGGCGCC 1787
|||||
38 OleuGlyLeu 41
|||||
1788 CCTGGGGCTG 1797

```

Sequence name: rnp2ndb:US-09-471-669A-48

```

Sequence documentation:
; Sequence 48, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basl, Gurigdal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408

```

```

; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 48
; LENGTH: 16080
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Expression
; OTHER INFORMATION: vector pCEK
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(16080)
; OTHER INFORMATION: n = a, c, g, or t.
US-09-471-669A-48

```

Alignment of: us-10-726-967a-1 x US-09-471-669A-48 ..

```

Alignment segment 1/1: (+)
      Matching length: 104.00      Total length: 44.7
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

```

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
1738 ACCGACGACGGCATCCGCTGCCCTGCGACGCGCTGGGGGGCGCC 1787
|||||
38 OleuGlyLeu 41
|||||
1788 CCTGGGGCTG 1797

```

Sequence name: rnp2ndb:US-09-713-158-1

```

Sequence documentation:
; Sequence 1, Application US/09713158
; Patent No. 6361975
; GENERAL INFORMATION:
; APPLICANT: ZHU, YUAN
; APPLICANT: LI, XIATONG
; APPLICANT: FOWELL, DAVID J.
; APPLICANT: CHRISTIE, GARY
; TITLE OF INVENTION: MOUSE ASPARTIC SECRETASE-2 (MASP-2)
; FILE REFERENCE: GP-70660
; CURRENT APPLICATION NUMBER: US/09/713,158
; PRIOR FILING DATE: 2000-11-15
; PRIOR APPLICATION NUMBER: 60/165,800
; PRIOR FILING DATE: 1999-11-16
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 1
; LENGTH: 1506
; TYPE: DNA
; ORGANISM: MUS MUSCULUS
US-09-713-158-1

```

Alignment of: us-10-726-967a-1 x US-09-713-158-1 ..

```

Alignment segment 1/1: (+)
      Matching length: 77.00      Total length: 83
      Matching Percent Similarity: 90.00      Matching Percent Identity: 80.00
      Total Percent Similarity: 90.00      Total Percent Identity: 80.00
      Gaps: 0

```


Alignment:

```
22 ThrGlnHsGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaLAr 38
      |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGCATCCGGCTGCCCTTCCGACGGCGCTGGCAGGCGCACCC 113
      |||::|||::|||::|||::|||::|||::|||::|||::|||
38 OleuGlyLeu 41
      |||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-548-372D-7

Sequence documentation:

```
; Sequence 7, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-548-372D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	86
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```
22 ThrGlnHsGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaLAr 38
      |||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGCATCCGGCTGCCCTTCCGACGGCGCTGGCAGGCGCACCC 113
      |||::|||::|||::|||::|||::|||::|||::|||::|||
38 OleuGlyLeu 41
      |||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-548-367D-7

Sequence documentation:

```
; Sequence 7, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 1999-09-23
```

```
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-548-367D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-367D-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	86
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```
22 ThrGlnHsGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaLAr 38
      |||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGCATCCGGCTGCCCTTCCGACGGCGCTGGCAGGCGCACCC 113
      |||::|||::|||::|||::|||::|||::|||::|||::|||
38 OleuGlyLeu 41
      |||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-551-853D-7

Sequence documentation:

```
; Sequence 7, Application US/09551853D
; Patent No. 6506667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-551-853D-7
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	86
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||::|
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGCCTGACAGGCCACC 113
38 oLeuGlyLeu 41
|||
114 CTGGGCGCTG 123

Sequence name: rnp2ndb:US-09-416-901B-7

Sequence documentation:

/ Sequence 7, Application US/09416901B
/ Patent No. 6699671
/ GENERAL INFORMATION:

/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280A
/ CURRENT FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 72
/ SOFTWARE: Patentin version 3.1
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-416-901B-7

Alignment of: us-10-726-967a-1 x US-09-416-901B-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||::|
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGCCTGACAGGCCACC 113
38 oLeuGlyLeu 41
|||
114 CTGGGCGCTG 123

Sequence name: rnp2ndb:US-09-548-376D-7

Sequence documentation:

/ Sequence 7, Application US/09548376D
/ Patent No. 6706485
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
/ FILE REFERENCE: 29915/6280F
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133

/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin version 3.1
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-548-376D-7

Alignment of: us-10-726-967a-1 x US-09-548-376D-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||::|
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGCCTGACAGGCCACC 113
38 oLeuGlyLeu 41
|||
114 CTGGGCGCTG 123

Sequence name: rnp2ndb:US-09-794-927A-7

Sequence documentation:

/ Sequence 7, Application US/09794927A
/ Patent No. 6727074
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280FG
/ CURRENT FILING DATE: US/09/794,927A
/ PRIOR APPLICATION NUMBER: 2001-02-27
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-794-927A-7

Alignment of: us-10-726-967a-1 x US-09-794-927A-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGGCTGGCAGGGCCACC 113
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
38 OleuGlyLeu
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-548-373D-7

Sequence documentation:

```
; Sequence 7, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 28915/62808
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-548-373D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Basecore:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGGCTGGCAGGGCCACC 113
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
38 OleuGlyLeu
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-795-847B-7

Sequence documentation:

```
; Sequence 7, Application US/09795847B
; Patent No. 6733163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/62808
; CURRENT APPLICATION NUMBER: US/09/795,847B
```

CURRENT FILING DATE: 2001-02-28

```
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-795-847B-7
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Basecore:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGGCTGGCAGGGCCACC 113
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
38 OleuGlyLeu
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-869-414-7

Sequence documentation:

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; Sequence 7, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/62808
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-869-414-7
```

Alignment of: us-10-726-967a-1 x US-09-869-414-7 ..

Alignment segment 1/1: (+)

Quality: 77.00 Score: 86
Matching length: 20 Total length: 20
Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00
Total Percent Similarity: 90.00 Total Percent Identity: 80.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGGCTGCGAGGCCACC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCCTG 123
```

Sequence name: rni2ndb:US-09-548-366F-7

Sequence documentation:

```
/ Sequence 7, Application US/09548366F
/ Patent No. 6797487
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280J
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-548-366F-7
```

Alignment of: us-10-726-967a-1 x US-09-548-366F-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGGCTGCGAGGCCACC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCCTG 123
```

Sequence name: rni2ndb:US-09-548-368D-7

Sequence documentation:

```
/ Sequence 7, Application US/09548368D
/ Patent No. 6825023
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ TITLE OF INVENTION: THEREOF
```

```
/ FILE REFERENCE: 29915/6280C
/ CURRENT APPLICATION NUMBER: US/09/548,368D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-548-368D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-368D-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGGCTGCGAGGCCACC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCCTG 123
```

Sequence name: rni2ndb:US-09-794-925A-7

Sequence documentation:

```
/ Sequence 7, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
US-09-794-925A-7
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-7 ..

Alignment segment 1/1: (+)

Quality: 77.00 Bascore: 86
Matching length: 20 Total length: 20
Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00
Total Percent Similarity: 90.00 Total Percent Identity: 80.00
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
64 ACCCATCTCGCATCCGGCTGCCCTTCGACAGCGGCTGGCAGGGCCACC 113
38 OleuGlyLeu 41
114 CTTGGGGCCCTG 123

Sequence name: rnp2ndb:US-09-806-194A-7

Sequence documentation:

Sequence 7, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
PRIORITY FILING DATE: 1998-09-24
PRIORITY APPLICATION NUMBER: 60/101,594
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-806-194A-7

Alignment of: us-10-726-967a-1 x US-09-806-194A-7

Alignment segment 1/1: (+)

Quality: 77.00 Bascore: 86
Matching length: 20 Total length: 20
Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00
Total Percent Similarity: 90.00 Total Percent Identity: 80.00
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
64 ACCCATCTCGCATCCGGCTGCCCTTCGACAGCGGCTGGCAGGGCCACC 113
38 OleuGlyLeu 41
114 CTTGGGGCCCTG 123

Sequence name: rnp2ndb:US-09-724-566A-42

Sequence documentation:

Sequence 42, Application US/09724566A
Patent No. 6627739
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Basi, Guripal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6627739mand
APPLICANT: John, Varghese

APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
METHODS OF INVENTION: Methods
FILE REFERENCE: 228-US-NEWC2
CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIORITY FILING DATE: 2000-02-10
PRIORITY APPLICATION NUMBER: US 09/501,708
PRIORITY FILING DATE: 1999-02-10
PRIORITY APPLICATION NUMBER: 60/119,571
PRIORITY FILING DATE: 1999-06-15
PRIORITY APPLICATION NUMBER: 60/139,172
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 42
LENGTH: 2348
TYPE: DNA
ORGANISM: Homo sapiens
US-09-724-566A-42

Alignment of: us-10-726-967a-1 x US-09-724-566A-42

Alignment segment 1/1: (-)

Quality: 38.00 Bascore: 237
Matching length: 14 Total length: 14
Matching Percent Similarity: 64.29 Matching Percent Identity: 57.14
Total Percent Similarity: 64.29 Total Percent Identity: 57.14
Gaps: 0

Alignment:

25 GlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
89 GGGATCCGAGCCCGCTACATCGGACAGCGGCGGCGACCT 48

Sequence name: rnp2ndb:US-09-724-566A-44

Sequence documentation:

Sequence 44, Application US/09724566A
Patent No. 6627739
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Basi, Guripal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6627739mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
METHODS OF INVENTION: Methods
FILE REFERENCE: 228-US-NEWC2
CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIORITY FILING DATE: 2000-02-10
PRIORITY APPLICATION NUMBER: US 09/501,708
PRIORITY FILING DATE: 1999-02-10
PRIORITY APPLICATION NUMBER: 60/119,571
PRIORITY FILING DATE: 1999-06-15
PRIORITY APPLICATION NUMBER: 60/139,172
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 44
LENGTH: 2348

TYPE: DNA
ORGANISM: Homo sapiens
US-09-724-566A-44

Alignment of: us-10-726-967a-1 x US-09-724-566A-44 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	237
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y1leAArgLeuProLeuAArgSerGlyLeuGlyAlaPro 38
89 GGATCCGAGCCCGCTACATCGCAGCGCGCGCCAGCCT 48

Sequence name: rnp2ndb:US-09-471-669A-42

Sequence documentation:

Sequence 42, Application US/09471669A
Patent No. 6830918
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Basl, Gurigdal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6830918mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
APPLICANT: Elian Pharmaceuticals, Inc.
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
CURRENT APPLICATION NUMBER: US/09/471,669A
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: US 60/114,408
PRIOR FILING DATE: 1998-12-31
PRIOR APPLICATION NUMBER: US 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 42
LENGTH: 2348
TYPE: DNA
ORGANISM: Homo sapiens
US-09-471-669A-42

Alignment of: us-10-726-967a-1 x US-09-471-669A-42 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	237
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y1leAArgLeuProLeuAArgSerGlyLeuGlyAlaPro 38
89 GGATCCGAGCCCGCTACATCGCAGCGCGCGCCAGCCT 48

Sequence name: rnp2ndb:US-09-471-669A-44

Sequence documentation:

Sequence 44, Application US/09471669A
Patent No. 6830918
GENERAL INFORMATION:
APPLICANT: Anderson, John P.
APPLICANT: Basl, Gurigdal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, No. 6830918mand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
APPLICANT: Tatsuno, Gwen
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
APPLICANT: Elian Pharmaceuticals, Inc.
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
CURRENT APPLICATION NUMBER: US/09/471,669A
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: US 60/114,408
PRIOR FILING DATE: 1998-12-31
PRIOR APPLICATION NUMBER: US 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 44
LENGTH: 2348
TYPE: DNA
ORGANISM: Homo sapiens
US-09-471-669A-44

Alignment of: us-10-726-967a-1 x US-09-471-669A-44 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	237
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y1leAArgLeuProLeuAArgSerGlyLeuGlyAlaPro 38
89 GGATCCGAGCCCGCTACATCGCAGCGCGCGCCAGCCT 48

Sequence name: rnp2ndb:US-09-949-016-4382

Sequence documentation:

Sequence 4382, Application US/0949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 4382
LENGTH: 5825


```
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-551-853D-50

Alignment of: us-10-726-967a-1 x US-09-551-853D-50  ..

Alignment segment 1/1: (-)

      Quality: 32.00      Bscore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rmp2ndb:US-09-416-901B-50

Sequence documentation:
; Sequence 50, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT FILING DATE: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-416-901B-50

Alignment of: us-10-726-967a-1 x US-09-416-901B-50  ..

Alignment segment 1/1: (-)

      Quality: 32.00      Bscore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rmp2ndb:US-09-548-376D-50

Sequence documentation:
; Sequence 50, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT FILING DATE: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-548-376D-50

Alignment of: us-10-726-967a-1 x US-09-548-376D-50  ..

Alignment segment 1/1: (-)

      Quality: 32.00      Bscore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rmp2ndb:US-09-794-927A-50

Sequence documentation:
; Sequence 50, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT FILING DATE: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
```

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Sequence documentation:
; Sequence 50, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT FILING DATE: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rmp2ndb:US-09-794-927A-50

Sequence documentation:
; Sequence 50, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT FILING DATE: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
```

```

; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-794-927A-50

Alignment of: us-10-726-967a-1 x US-09-794-927A-50 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT      147

Sequence name: rni2ndb:US-09-795-847B-50

Sequence documentation:
; Sequence 50, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.

      Quality: 32.00      EScore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT      147

Sequence name: rni2ndb:US-09-795-847B-50

Sequence documentation:
; Sequence 50, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: Gurney ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548, 373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-548-373D-50

Alignment of: us-10-726-967a-1 x US-09-548-373D-50 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT      147

Sequence name: rni2ndb:US-09-869-414-50

Sequence documentation:
; Sequence 50, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
```


Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleuProleuArgserglyLeuGlyAla
:::|||||
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

147

Sequence name: rn1p2ndb:US-09-548-372D-25

Sequence documentation:

/ Sequence 25, Application US/09548372D
/ Patent No. 6420534
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/62801
/ CURRENT APPLICATION NUMBER: US/09/548,372D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-372D-25

Alignment of: us-10-726-967a-1 x US-09-548-372D-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleuProleuArgserglyLeuGlyAla
:::|||||
119 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

87

Sequence name: rn1p2ndb:US-09-548-367D-25

Sequence documentation:

/ Sequence 25, Application US/09548367D
/ Patent No. 6440698
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/62801
/ CURRENT APPLICATION NUMBER: US/09/548,367D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-367D-25

Alignment of: us-10-726-967a-1 x US-09-548-367D-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleuProleuArgserglyLeuGlyAla
:::|||||
119 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

87

Sequence name: rn1p2ndb:US-09-551-853D-25

Sequence documentation:

/ Sequence 25, Application US/09551853D
/ Patent No. 6500667
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/62801
/ CURRENT APPLICATION NUMBER: US/09/551,853D
/ CURRENT FILING DATE: 2000-04-18
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-551-853D-25

Alignment of: us-10-726-967a-1 x US-09-551-853D-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgleuProleuArgserglyLeuGlyAla
:::|||||
119 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

87

Sequence name: rni2ndb:US-09-416-901B-25

```

: Sequence documentation:
: Sequence 25. Application: US/09416901B
: Patent No. 6699671
:
: GENERAL INFORMATION:
: APPLICANT: GURNEY ET AL.
: TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
: TITLE OF INVENTION: THEREOF
: FILE REFERENCE: 29915/6280A
: CURRENT APPLICATION NUMBER: US/09/416, 901B
: CURRENT FILING DATE: 1999-10-13
: PRIOR APPLICATION NUMBER: US 60/155,493
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 09/404,133
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: PCT/US99/20881
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 60/101,594
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 72
: SOFTWARE: PatentIn version 3.1
:
: SEQ ID NO 25
:
: LENGTH: 1302
:
: TYPE: DNA
:
: ORGANISM: Homo sapiens
:
: US-09-416-901B-25

```

Alignment of: us-10-726-967a-1 x US-09-416-901B-25

Alignment segment 1/1: (-)

Quality:	33.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGCACGGCTCCTCGGGCTCT    87
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Sequence name: rnp2ndb:US-09-548-376D-25

```

Sequence documentation:
Sequence 25, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GUNNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
TITLE OF INVENTION: AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280P
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-376D-25

```

Alignment of: us-10-726-967a-1 x US-09-548-376D-25

Alignment segment 1/1: (-)

Quality:	32.00	EScore:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyAla	37
:::		:::
119	AACTGCCCCCTCCGCCGGCTCTCGGCTCT	87

Sequence name: rni_p2ndb:US-09-794-927A-25

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Sequence documentation:
; Sequence 25, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, App Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-927A-25

```

Alignment of: us-10-726-967a-1 x US-09-794-927A-25

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyAla	37
:::	:::	
119	AAAGTGGCCCTCCGGCCGGGCTCCTCGGGCTCT	87

Sequence name: rnip2ndb:US-09-548-373D-25

Sequence documentation:
Sequence 25, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GUNNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THERBOF
FILE REFERENCE: 29915/62808

```

; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-373D-25
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Alignment of: us-10-726-967a-1 x US-09-548-373D-25 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	252
Matching length:		11	Total length:		11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
119 AAGTGGCCCTCCGGCGGCTCTCGGCTCT
                                     37
                                     87
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Sequence name: rntp2ndb:US-09-795-847B-25

Sequence documentation:

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; Sequence 25, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/62808
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847B-25
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Alignment of: us-10-726-967a-1 x US-09-795-847B-25 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 252

	Matching length:	11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
119 AAGTGGCCCTCCGGCGGCTCTCGGCTCT
                                     37
                                     87
```

Sequence name: rntp2ndb:US-09-869-414-25

Sequence documentation:

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; Sequence 25, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/62808
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-25
```

Alignment of: us-10-726-967a-1 x US-09-869-414-25 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	252
Matching length:		11	Total length:		11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
119 AAGTGGCCCTCCGGCGGCTCTCGGCTCT
                                     37
                                     87
```

Sequence name: rntp2ndb:US-09-548-366F-25

Sequence documentation:

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; Sequence 25, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: Gurney ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62807
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
```

PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366F-25

Alignment of: us-10-726-967a-1 x US-09-548-366F-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
119 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rnp2ndb:US-09-548-368D-25

Sequence documentation:

Sequence 25, Application US/09548368D
Patent No. 6825023
GENERAL INFORMATION:
APPLICANT: GUNNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280C
CURRENT APPLICATION NUMBER: US/09/548,368D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-368D-25

Alignment of: us-10-726-967a-1 x US-09-548-368D-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
119 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rnp2ndb:US-09-794-925A-25

Sequence documentation:
Sequence 25, Application US/09794925A
Patent No. 6828117
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280H
CURRENT APPLICATION NUMBER: US/09/794,925A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-925A-25

Alignment of: us-10-726-967a-1 x US-09-794-925A-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
119 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rnp2ndb:US-09-806-194A-25

Sequence documentation:

Sequence 25, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Henriksen, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Van, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 25
LENGTH: 1302
TYPE: DNA
ORGANISM: Homo sapiens
US-09-806-194A-25

Alignment of: us-10-726-967a-1 x US-09-806-194A-25 ..

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rnp2ndb:US-09-416-901B-52

Sequence documentation:

Sequence 52, Application US/09416901B
Patent No. 669671

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

FILE REFERENCE: 29915/6280A

CURRENT APPLICATION NUMBER: US/09/416,901B

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 72

SOFTWARE: PatentIn version 3.1

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-416-901B-52

Alignment of: us-10-726-967a-1 x US-09-416-901B-52 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	252
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rnp2ndb:US-09-548-376D-52

Sequence documentation:

Sequence 52, Application US/09548376D
Patent No. 6706485

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR

FILE REFERENCE: 29915/6280F

CURRENT APPLICATION NUMBER: US/09/548,376D

PRIOR FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-376D-52

Alignment of: us-10-726-967a-1 x US-09-548-376D-52 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	252
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rnp2ndb:US-09-794-927A-52

Sequence documentation:

Sequence 52, Application US/09794927A
Patent No. 6727074

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

FILE REFERENCE: 29915/6280FG

CURRENT APPLICATION NUMBER: US/09/794,927A

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-794-927A-52

Alignment of: us-10-726-967a-1 x US-09-794-927A-52 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	252
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-548-373D-52

Sequence documentation:

Sequence 52, Application US/09548373D
Patent No. 6737510

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

FILE REFERENCE: 29915/6280B

CURRENT APPLICATION NUMBER: US/09/548,373D

CURRENT FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn version 3.1

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-373D-52

Alignment of: us-10-726-967a-1 x US-09-548-373D-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	252
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-795-847B-52

Sequence documentation:

Sequence 52, Application US/09795847B

Patent No. 6753163

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinikson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280DE

CURRENT APPLICATION NUMBER: US/09/795,847B

CURRENT FILING DATE: 2001-02-28

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:
OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-795-847B-52

Alignment of: us-10-726-967a-1 x US-09-795-847B-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	252
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-869-414-52

Sequence documentation:

Sequence 52, Application US/09869414

Patent No. 6790610

GENERAL INFORMATION:

APPLICANT: Bienkowski et al.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280M

CURRENT APPLICATION NUMBER: US/09/869,414

CURRENT FILING DATE: 2001-06-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)

US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	252
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

179 AAGTGGCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: rnp2ndb:US-09-548-366F-52

Sequence documentation:

; Sequence 52, Application US/09548366F

; Patent No. 6797487

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280J

; CURRENT APPLICATION NUMBER: US/09/548,366F

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-366F-52

Alignment of: us-10-726-967a-1 x US-09-548-366F-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Bscore:	252
Matching length:		11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

37

:::|||||

179 AAGTGGCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: rnp2ndb:US-09-548-368D-52

Sequence documentation:

; Sequence 52, Application US/09548368D

; Patent No. 6825023

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280C

; CURRENT APPLICATION NUMBER: US/09/548,368D

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-368D-52

Alignment of: us-10-726-967a-1 x US-09-548-368D-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Bscore:	252
Matching length:		11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

37

:::|||||

179 AAGTGGCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: rnp2ndb:US-09-794-925A-52

Sequence documentation:

; Sequence 52, Application US/09794925A

; Patent No. 6828117

; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280H1

; CURRENT APPLICATION NUMBER: US/09/794,925A

; CURRENT FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-794-925A-52

Alignment of: us-10-726-967a-1 x US-09-794-925A-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Bscore:	252
Matching length:		11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

37

:::|||||

179 AAGTGGCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: rnp2ndb:US-09-548-372D-21

Sequence documentation:

; Sequence 21, Application US/09548372D

PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: Patentin version 3.1
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-416-901B-21

Alignment of: us-10-726-967a-1 x US-09-416-901B-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
158 AAGCTGCCCTCCGGCGGCTCTCGGCTCT

37
126

Sequence name: rni2ndb:US-09-548-376D-21

Sequence documentation:

Sequence 21, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
TITLE OF INVENTION: AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-376D-21

Alignment of: us-10-726-967a-1 x US-09-548-376D-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
158 AAGCTGCCCTCCGGCGGCTCTCGGCTCT

37
126

Sequence name: rni2ndb:US-09-794-927A-21

Sequence documentation:

Sequence 21, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927A-21

Alignment of: us-10-726-967a-1 x US-09-794-927A-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
158 AAGCTGCCCTCCGGCGGCTCTCGGCTCT

37
126

Sequence name: rni2ndb:US-09-548-373D-21

Sequence documentation:

Sequence 21, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280B
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-373D-21

Alignment of: us-10-726-967a-1 x US-09-548-373D-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
158 AAGCTGCCCCCTCCGGCCGGCTCTCCGGGCTCT

37
126

Sequence name: rnt2ndb:US-09-795-847B-21

Sequence documentation:

Sequence 21, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/62808
CURRENT APPLICATION NUMBER: US/09/795,847B
PRIORITY FILING DATE: 2001-02-28
PRIORITY APPLICATION NUMBER: 09/416,901
PRIORITY FILING DATE: 1999-10-13
PRIORITY APPLICATION NUMBER: 60/155,493
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 60/101,594
PRIORITY FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847B-21

Alignment of: us-10-726-967a-1 x US-09-795-847B-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
158 AAGCTGCCCCCTCCGGCCGGCTCTCCGGGCTCT

37
126

Sequence name: rnt2ndb:US-09-869-414-21

Sequence documentation:

Sequence 21, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/62808
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIORITY FILING DATE: 09/416,901
PRIORITY FILING DATE: 1999-10-13
PRIORITY APPLICATION NUMBER: 60/155,493
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 60/101,594
PRIORITY FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-21

Alignment of: us-10-726-967a-1 x US-09-869-414-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
158 AAGCTGCCCCCTCCGGCCGGCTCTCCGGGCTCT

37
126

Sequence name: rnt2ndb:US-09-548-366F-21

Sequence documentation:

Sequence 21, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/62805
CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12
PRIORITY FILING DATE: 09/416,901
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: 09/404,133
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: PCT/US99/20881
PRIORITY FILING DATE: 1999-09-23
PRIORITY APPLICATION NUMBER: US 60/101,594
PRIORITY FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 21
LENGTH: 1341
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366F-21

Alignment of: us-10-726-967a-1 x US-09-548-366F-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 72
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 29
;; LENGTH: 1362
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-416-901B-29

Alignment of: us-10-726-967a-1 x US-09-416-901B-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-548-376D-29

Sequence documentation:

;; Sequence 29, Application US/09548376D
;; Patent No. 6706485
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
;; TITLE OF INVENTION: AND USES
;; FILE REFERENCE: 29915/6280F
;; CURRENT APPLICATION NUMBER: US/09/548,376D
;; CURRENT FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 29
;; LENGTH: 1362
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-548-376D-29

Alignment of: us-10-726-967a-1 x US-09-548-376D-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-794-927A-29

Sequence documentation:

;; Sequence 29, Application US/09794927A
;; Patent No. 6727074
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280FG
;; CURRENT APPLICATION NUMBER: US/09/794,927A
;; CURRENT FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 29
;; LENGTH: 1362
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-794-927A-29

Alignment of: us-10-726-967a-1 x US-09-794-927A-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-548-373D-29

Sequence documentation:

;; Sequence 29, Application US/09548373D
;; Patent No. 6737510
;; GENERAL INFORMATION:
;; APPLICANT: GURNEY ET AL.
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
;; FILE REFERENCE: 29915/6280B
;; CURRENT APPLICATION NUMBER: US/09/548,373D
;; CURRENT FILING DATE: 2000-04-12
;; PRIOR APPLICATION NUMBER: US 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 73
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 29
;; LENGTH: 1362
;; TYPE: DNA
;; ORGANISM: Homo sapiens
US-09-548-373D-29

Alignment of: us-10-726-967a-1 x US-09-548-373D-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleuProleuArgserGlyleuGlyAla
:::|||||
179 AAGCTGCCCCCTCGCGGCTCTCGGCTCT

Sequence name: rnp2ndb:US-09-795-847B-29

Sequence documentation:

Sequence 29, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280DE

CURRENT APPLICATION NUMBER: US/09/795,847B

CURRENT FILING DATE: 2001-02-28

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 29

LENGTH: 1362

TYPE: DNA

ORGANISM: Homo sapiens

US-09-795-847B-29

Alignment of: us-10-726-967a-1 x US-09-795-847B-29

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleuProleuArgserGlyleuGlyAla
:::|||||
179 AAGCTGCCCCCTCGCGGCTCTCGGCTCT

Sequence name: rnp2ndb:US-09-869-414-29

Sequence documentation:

Sequence 29, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Beinowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 29

LENGTH: 1362

TYPE: DNA

ORGANISM: Homo sapiens

US-09-869-414-29

Alignment of: us-10-726-967a-1 x US-09-869-414-29

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleuProleuArgserGlyleuGlyAla
:::|||||
179 AAGCTGCCCCCTCGCGGCTCTCGGCTCT

Sequence name: rnp2ndb:US-09-548-366F-29

Sequence documentation:

Sequence 29, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 29915/6280J
CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn version 3.1

SEQ ID NO 29

LENGTH: 1362
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-366F-29

Alignment of: us-10-726-967a-1 x US-09-548-366F-29

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||
179 AAGCTGCCCTCCGGCCGGGCTCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-548-368D-29

Sequence documentation:

; Sequence 29, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIORITY FILING DATE: 2000-04-12
; PRIORITY APPLICATION NUMBER: US 60/155,493
; PRIORITY FILING DATE: 1999-09-23
; PRIORITY APPLICATION NUMBER: US 09/404,133
; PRIORITY FILING DATE: 1999-09-23
; PRIORITY APPLICATION NUMBER: PCT/US99/20881
; PRIORITY FILING DATE: 1999-09-23
; PRIORITY APPLICATION NUMBER: US 60/101,594
; PRIORITY FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-29

Alignment of: us-10-726-967a-1 x US-09-548-368D-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||
179 AAGCTGCCCTCCGGCCGGGCTCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-794-925A-29

Sequence documentation:

; Sequence 29, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; PRIORITY FILING DATE: 2001-02-27
; PRIORITY APPLICATION NUMBER: 09/416,901
; PRIORITY FILING DATE: 1999-10-13
; PRIORITY APPLICATION NUMBER: 60/155,493
; PRIORITY FILING DATE: 1999-09-23
; PRIORITY APPLICATION NUMBER: 09/404,133
; PRIORITY FILING DATE: 1999-09-23
; PRIORITY APPLICATION NUMBER: PCT/US99/20881
; PRIORITY FILING DATE: 1999-09-23
; PRIORITY APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29

; LENGTH: 1362

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-794-925A-29

Alignment of: us-10-726-967a-1 x US-09-794-925A-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||
179 AAGCTGCCCTCCGGCCGGGCTCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-806-194A-29

Sequence documentation:

; Sequence 29, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: GURNEY, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Helms, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; PRIORITY FILING DATE: 2001-09-17
; PRIORITY APPLICATION NUMBER: 60/101,594
; PRIORITY FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-806-194A-29

Alignment of: us-10-726-967a-1 x US-09-806-194A-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||
179 AAGCTGCCCTCCGGCCGGGCTCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-548-372D-23

Sequence documentation:

; Sequence 23, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:

```

1  APPLICANT: GURNEY ET AL.
2  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
3  TITLE OF INVENTION: THEREOF
4  FILE REFERENCE: 29915/62801
5  CURRENT APPLICATION NUMBER: US/09/548,372D
6  CURRENT FILING DATE: 2000-04-12
7  PRIOR APPLICATION NUMBER: US 60/155,493
8  PRIOR FILING DATE: 1999-09-23
9  PRIOR APPLICATION NUMBER: US 09/404,133
10 PRIOR FILING DATE: 1999-09-23
11 PRIOR APPLICATION NUMBER: PCT/US99/20861
12 PRIOR FILING DATE: 1999-09-23
13 PRIOR APPLICATION NUMBER: US 60/101,594
14 PRIOR FILING DATE: 1998-09-24
15 NUMBER OF SEQ ID NOS: 73
16 SOFTWARE: PatentIn version 3.1
17 SEQ ID NO 23
18 LENGTH: 1380
19 TYPE: DNA
20 ORGANISM: Homo sapiens
21 US-09-548-372D-23

```

```

Alignment of: us-10-726-967a-1 x US-09-548-372D-23  ..
Alignment segment 1/1: (-)

      Quality:      32.00      Score:      253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

```

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37  
:::|||||  
197 AAGCTGCCCTCCCGGGCGGACTCCTCCGGGCTCTN 16
```

```

Sequence name: rnlp2ndb:US-09-548-372D-31
Sequence documentation:
; Sequence 31, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548, 372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-372D-31

```

```

Alignment of: us-10-726-967a-1 x US-09-548-572D-31  ..
Alignment segment 1/1: (-)
    Quality:      32.00      EScore:      253
    Matching length: 11      Total length: 55
    Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55

```

```

Total Percent Similarity: 81.82      Total Percent Identity: 54.55
                        Gaps: 0
Alignment:
  27 ArgLeuProLeuArgSerGlyLeuClglyLysAla      37
    ::::::::::::::|::|::|::|::|::|::|::|::|
  179 AAGCTGACCCCTCCGGCCGAGGCTCCTCCGAGGACTCT  147

```

Sequence name: rnip2ndb:US-09-548-367D-23

```

Sequence documentation:
; Sequence 23, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GUNNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-367D-23

```

Alignment of: us-10-726-967a-1 x US-09-548-367D-23 .
Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuPheLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|:::|:::|
197 AAGCGCCCGCCCTCCGCGCCGCGCTCCTCGGCTCT 165

Sequence name: rnp2ndb:US-09-548-367D-31

Sequence documentation:
; Sequence 31, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GUINERY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24

```


Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
197 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGGCTCT

37
165

Sequence name: rmlp2ndb:US-09-416-901B-31

Sequence documentation:

/ Sequence 31, Application US/09416901B
/ Patent No. 6699671
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/6280A
/ CURRENT APPLICATION NUMBER: US/09/416,901B
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 72
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 31
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-416-901B-31

Alignment of: us-10-726-967a-1 x US-09-416-901B-31 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGGCTCT

37
147

Sequence name: rmlp2ndb:US-09-548-376D-23

Sequence documentation:

/ Sequence 23, Application US/09548376D
/ Patent No. 6706485
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
/ TITLE OF INVENTION: AND USES
/ FILE REFERENCE: 29915/6280F
/ CURRENT APPLICATION NUMBER: US/09/548,376D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-376D-23

Alignment of: us-10-726-967a-1 x US-09-548-376D-23 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
197 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGGCTCT

37
165

Sequence name: rmlp2ndb:US-09-548-376D-31

Sequence documentation:

/ Sequence 31, Application US/09548376D
/ Patent No. 6706485
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/6280F
/ CURRENT APPLICATION NUMBER: US/09/548,376D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 31
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-376D-31

Alignment of: us-10-726-967a-1 x US-09-548-376D-31 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|
179 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGGCTCT

37
147

Sequence name: rmlp2ndb:US-09-794-927A-23


```

1  PRIOR APPLICATION NUMBER: 60/155,493
2  PRIOR FILING DATE: 1999-09-23
3  PRIOR APPLICATION NUMBER: 09/404,133
4  PRIOR FILING DATE: 1999-09-23
5  PRIOR APPLICATION NUMBER: PCT/US99/20681
6  PRIOR FILING DATE: 1999-09-23
7  PRIOR APPLICATION NUMBER: 60/101,594
8  PRIOR FILING DATE: 1998-09-24
9  NUMBER OF SEQ ID NOS: 73
10 SOFTWARE: PatentIn Ver. 2.0
11 SEQ ID NO 23
12     LENGTH: 1380
13     TYPE: DNA
14     ORGANISM: Homo sapiens
15     US-09-869-414-23

```

```

Alignment of: us-10-726-967a-1 x US-09-8669-414-23  ..
Alignment segment 1/1: (-)

      Quality:      32.00      EScore:      253
Matching length:    11        Total length:  11
Matching Percent Similarity:  81.82      Matching Percent Identity:  54.55
Total Percent Similarity:    81.82      Total Percent Identity:    54.55
Gap:      0

```

Alignment:

27	ArgLeuProLeuArgserGlyLeuGlyGlyAla	37
	:::	
197	AAcTrGccCctTccGccGccGctTccTccGccGctT	165

```

: Sequence documentation:
: Sequence 31, Application US/09869414
: Patent No. 6790610
:
: GENERAL INFORMATION:
:   APPLICANT: Beinowski et al.
:   TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
:   FILE REFERENCE: 28341/6280M
:   CURRENT APPLICATION NUMBER: US/09/869,414
:   CURRENT FILING DATE: 2001-06-27
:   PRIOR APPLICATION NUMBER: 09/416,901
:   PRIOR FILING DATE: 1999-10-13
:   PRIOR APPLICATION NUMBER: 60/155,493
:   PRIOR FILING DATE: 1998-09-23
:   PRIOR APPLICATION NUMBER: 09/404,133
:   PRIOR FILING DATE: 1999-09-23
:   PRIOR APPLICATION NUMBER: PCT/US99/20881
:   PRIOR FILING DATE: 1999-09-23
:   PRIOR APPLICATION NUMBER: 60/101,594
:   PRIOR FILING DATE: 1998-09-24
:   NUMBER OF SEQ ID NOS: 73
:   SOFTWARE: PatentIn Ver. 2.0
:   SEQ ID NO 31
:   LENGTH: 1380
:   TYPE: DNA
:   ORGANISM: Homo sapiens
:   US-09-869-414-31

```

```

Alignment of: us-10-726-9678-1 x US-09-869-414-31  ..
Alignment segment 1/1: (-)

      Quality:      32.00      EScore:      253
      Matching length:      11      Total length:      11
      Matching Percent Similarity:      81.82      Matching Percent Identity:      54.55
      Total Percent Similarity:      81.82      Total Percent Identity:      54.55
      Gaps:      0

```

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
   ::||| ||| ||| ::||| ::|||
179 AAGCTGCCCTCCGCCGGCTCTCGGGCTCT      144

```

Sequence name: rnp2ndb:US-09-548-366F-23

```

Sequence documentation:
: Sequence 23, Application US/09548366F
: Patent No. 6797487
: GENERAL INFORMATION:
: APPLICANT: GURENBY ET AL.
: TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
: TITLE OF INVENTION: THEREOF
: FILE REFERENCE: 29915/6280J
: CURRENT APPLICATION NUMBER: US/09/548,366F
: CURRENT FILING DATE: 2000-04-12
: PRIOR APPLICATION NUMBER: US 60/155,493
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 09/404,133
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: PCT/US99/20881
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 60/101,594
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 73
: SOFTWARE: Patentin version 3.1
: SEQ ID NO 23
: LENGTH: 1380
: TYPE: DNA
: ORGANISM: Homo sapiens
: US-09-548-366F-23

```

Alignment of: us-10-726-967a-1 x US-09-548-366F-23 .
Alignment segment 1/1: (-)

Quality:	32.00	Escape:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||||:::|
197 AAGCTGCCCCCTCCGGCCGGGCTCCTCCGGCTCT 166

Sequence name: rn1p2ndb:US-09-548-366F-31

```

Sequence documentation:
Sequence 31, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280J
CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1.1
SEQ ID NO 31
LENGTH: 1380

```

```

; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-31

Alignment of: us-10-726-967a-1 x US-09-548-366F-31 ..

Alignment segment 1/1: (-)

      Quality:      32.00      Score:      253
      Matching length:      11      Total length:      11
      Matching Percent Similarity:      81.82      Matching Percent Identity:      54.55
      Total Percent Similarity:      81.82      Total Percent Identity:      54.55
      Gaps:      0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

Sequence name: rni2ndb:US-09-548-368D-23

Sequence documentation:
; Sequence 23, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-23

Alignment of: us-10-726-967a-1 x US-09-548-368D-23 ..

Alignment segment 1/1: (-)

      Quality:      32.00      Score:      253
      Matching length:      11      Total length:      11
      Matching Percent Similarity:      81.82      Matching Percent Identity:      54.55
      Total Percent Similarity:      81.82      Total Percent Identity:      54.55
      Gaps:      0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::
197 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

Sequence name: rni2ndb:US-09-548-368D-31

Sequence documentation:
; Sequence 31, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-31

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```

; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-31
..
Alignment of: us-10-726-967a-1 x US-09-548-368D-31
..
Alignment segment 1/1: (-)
Quality: 32.00      EScore: 253
Matching length:    11      Total length:   11
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
Total Percent Similarity: 81.82      Total Percent Identity: 54.55
Gaps: 0              Total Percent Identity: 54.55

Alignment:
       27 ArgLeuProlLeuArgSerQlyLeugLygIyAla          37
        ::|||::|||::|||::|||::|||::|||::|||::|||::|||
179 AAGCTCCCTCGGGGCCGTCTCGGGCTCTCGGGCTCT          147

Sequence name: rnp2ndb:US-09-794-925A-23

Sequence documentation:
; Sequence 23, Application US/0979492SA
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OR INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925A-23

```

Alignment: Gaps: 0

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
197 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37
165

Sequence name: rnp2ndb:US-09-794-925A-31

Sequence documentation:

; Sequence 31, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-925A-31

Alignment of: us-10-726-967a-1 x US-09-794-925A-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Base:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37
147

Sequence name: rnp2ndb:US-09-806-194A-23

Sequence documentation:

; Sequence 23, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Blenkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49

; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-806-194A-23

Alignment of: us-10-726-967a-1 x US-09-806-194A-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Base:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
197 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37
165

Sequence name: rnp2ndb:US-09-806-194A-31

Sequence documentation:

; Sequence 31, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Blenkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-806-194A-31

Alignment of: us-10-726-967a-1 x US-09-806-194A-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Base:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37
147

Sequence name: rnp2ndb:US-09-724-566A-1

Sequence documentation:

; Sequence 1, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guripal

```

; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; TITLE OF INVENTION: Methods
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-724-566A-1

```

Alignment of: us-10-726-967a-1 x US-09-724-566A-1 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	254
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgleupProleuArgSerGlyLeuGlyGlyA1a 37
:::|||||:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 147

```

Sequence name: rnp2ndb:US-09-471-669A-1

Sequence documentation:

```

; Sequence 1, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basl, Gurliqbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Ekan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108

```

```

; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-471-669A-1

```

Alignment of: us-10-726-967a-1 x US-09-471-669A-1 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	254
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgleupProleuArgSerGlyLeuGlyGlyA1a 37
:::|||||:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 147

```

Sequence name: rnp2ndb:US-09-548-372D-5

Sequence documentation:

```

; Sequence 5, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1998-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-372D-5

```

Alignment of: us-10-726-967a-1 x US-09-548-372D-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	258
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```

27 ArgleupProleuArgSerGlyLeuGlyGlyA1a 37
:::|||||:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 147

```

Sequence name: rnp2ndb:US-09-548-367D-5

Sequence documentation:

```

; Sequence 5, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:

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Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-794-925A-5

Sequence documentation:

; Sequence 5, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/794, 925A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925A-5

Alignment of: us-10-726-967a-1 x US-09-794-925A-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	258
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-806-194A-5

Sequence documentation:

; Sequence 5, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heintikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; PRIOR FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-806-194A-5

Alignment of: us-10-726-967a-1 x US-09-806-194A-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	258
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-548-372D-3

Sequence documentation:

; Sequence 3, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280I
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-372D-3

Alignment of: us-10-726-967a-1 x US-09-548-372D-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	258
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-548-367D-3

Sequence documentation:

; Sequence 3, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.

Quality:	32.00	Bscore:	256
Matching length:	11	Total length:	111
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Sequence documentation:
Sequence 3, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
TITLE OF INVENTION: AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO: 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-376D-3

Alignment of: us-10-726-967a-1 x US-09-548-376D-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGTGCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-794-927A-3

Sequence documentation:

/ Sequence 3, Application US/09794927A
/ Patent No. 6727074
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280FG
/ CURRENT APPLICATION NUMBER: US/09/794,927A
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO: 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-927A-3

Alignment of: us-10-726-967a-1 x US-09-794-927A-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGTGCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-548-373D-3

Sequence documentation:

/ Sequence 3, Application US/09548373D
/ Patent No. 6737510
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280B
/ CURRENT APPLICATION NUMBER: US/09/548,373D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO: 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-373D-3

Alignment of: us-10-726-967a-1 x US-09-548-373D-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
179 AAGTGCCTCCGCGCGGCTCTCGGCTCT

37
147

Sequence name: rni2ndb:US-09-795-847B-3

Sequence documentation:

/ Sequence 3, Application US/09795847B
/ Patent No. 6753163
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Ridiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280DE
/ CURRENT APPLICATION NUMBER: US/09/795,847B
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO: 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens

US-09-795-847B-3

Alignment of: us-10-726-967a-1 x US-09-795-847B-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||
179 AAGCTGCCCCCTCGGCGGCTCTCGGCTCT

37
147

Sequence name: rmlp2ndb:US-09-869-414-3

Sequence documentation:

; Sequence 3, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Belkowsky et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-3

Alignment of: us-10-726-967a-1 x US-09-869-414-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||
179 AAGCTGCCCCCTCGGCGGCTCTCGGCTCT

37
147

Sequence name: rmlp2ndb:US-09-548-366F-3

Sequence documentation:

; Sequence 3, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-3

FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-3

Alignment of: us-10-726-967a-1 x US-09-548-366F-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||
179 AAGCTGCCCCCTCGGCGGCTCTCGGCTCT

37
147

Sequence name: rmlp2ndb:US-09-548-368D-3

Sequence documentation:

; Sequence 3, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-3

Alignment of: us-10-726-967a-1 x US-09-548-368D-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-794-925A-3

Sequence documentation:

; Sequence 3, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280HT
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925A-3

Alignment of: us-10-726-967a-1 x US-09-794-925A-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Base:	258
Matching length:		11		Total length:	11
Matching Percent Similarity:		81.82		Matching Percent Identity:	54.55
Total Percent Similarity:		81.82		Total Percent Identity:	54.55
Gaps:		0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-806-194A-3

Sequence documentation:

; Sequence 3, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3

; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-806-194A-3

Alignment of: us-10-726-967a-1 x US-09-806-194A-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Base:	258
Matching length:		11		Total length:	11
Matching Percent Similarity:		81.82		Matching Percent Identity:	54.55
Total Percent Similarity:		81.82		Total Percent Identity:	54.55
Gaps:		0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||
179 AAGCTGCCCCCTCCGGCGGCTCCTCGGGCTCT

37
147

Sequence name: rnp2ndb:US-09-009-191-1

Sequence documentation:

; Sequence 1, Application US/09009191
; Patent No. 6319689
; GENERAL INFORMATION:
; APPLICANT: POWELL, DAVID
; APPLICANT: CHAPMAN, CONRAD
; APPLICANT: MURPHY, KAY
; APPLICANT: SMITH, TRUDI
; TITLE OF INVENTION: ASP2
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: RATHER & PRESTIA
; STREET: P.O. BOX 980
; CITY: VALLEY Forge
; STATE: PA
; COUNTRY: USA
; ZIP: 19482
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/009,191
; FILING DATE: 20-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 9701684.4
; FILING DATE: 28-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: PRESTIA, PAUL F
; REGISTRATION NUMBER: 23,031
; REFERENCE/DOCKET NUMBER: GH-70368
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 610-407-0700
; TELEFAX: 610-407-0701
; TELEX: 846169
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2541 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
US-09-009-191-1

Alignment of: us-10-726-967a-1 x US-09-009-191-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	EScore:	261
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT  14

```

Sequence name: rni2ndb:US-09-604-608-1

Sequence documentation:

```

: Sequence 1 Application US/09604608
: Patent No. 6545127
: GENERAL INFORMATION:
: APPLICANT: Tang, Jordan J.N.
: APPLICANT: Lin, Xinli
: APPLICANT: Koelsch, Gerald
: TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
: TITLE OF INVENTION: Of Use Thereof
: FILE REFERENCE: OMRF 179
: CURRENT APPLICATION NUMBER: US/09/604,608
: CURRENT FILING DATE: 2000-06-27
: PRIOR APPLICATION NUMBER: 60/141,363
: PRIOR FILING DATE: 1999-06-28
: PRIOR APPLICATION NUMBER: 60/168,060
: PRIOR FILING DATE: 1999-11-30
: PRIOR APPLICATION NUMBER: 60/177,836
: PRIOR FILING DATE: 2000-01-25
: PRIOR APPLICATION NUMBER: 60/178,368
: PRIOR FILING DATE: 2000-01-27
: PRIOR APPLICATION NUMBER: 60/210,292
: PRIOR FILING DATE: 2000-06-08
: NUMBER OF SEQ ID NOS: 31
: SOFTWARE: PatentIn Ver. 2.1
: SEQ ID NO 1
: LENGTH: 3252
: TYPE: DNA
: ORGANISM: Homo sapiens
: US-09-604-608-1

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Alignment of: us-10-726-967a-1 x US-09-604-608-1

Alignment segment 1/1: (-)

Quality:	32.00	EScore:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::
140 AAGCTGCCCCCTCCGGCCGGGCTCCTCGGGCTCT 10

Sequence name: rni2ndb:US-09-548-372D-27

Sequence documentation:

Sequence 27, Application US/09548372D
Patent No. 6420534
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493

```

1  PRIOR FILING DATE: 1999-09-23
2  PRIOR APPLICATION NUMBER: US 09/404,133
3  PRIOR FILING DATE: 1999-09-23
4  PRIOR APPLICATION NUMBER: PCT/US99/20081
5  PRIOR FILING DATE: 1999-09-23
6  PRIOR APPLICATION NUMBER: US 60/101,594
7  PRIOR FILING DATE: 1998-09-24
8  NUMBER OF SEQ ID NOS: 73
9  SOFTWARE: PatentIn version 3.1
10 SEQ ID NO 27
11 LENGTH: 1278
12 TYPE: DNA
13 ORGANISM: Homo sapiens
14 US-09-548-572D-27

```

Alignment of: us-10-726-967a-1 x US-09-548-372D-27

Alignment segment 1/1: (+)

Quality:	28.00	Escape:	266
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

```

27  ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro    38
   |||||      :::::||||| ||||| |||
1170 CGCTTGCATGTGCACGATGAGTTCAAGGACGGCAGCGGTGGAAAGGCC    1278

```

Sequence name: rnp2ndb:US-09-548-367D-27

Sequence documentation:

```

: Sequence 27 Application US/09548367D
: Patent No. 6440698
:
: GENERAL INFORMATION:
:
: APPLICANT: GURNEY ET AL.
:
: TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
:
: TITLE OF INVENTION: THEREOF
:
: FILE REFERENCE: 29915/6280H
:
: CURRENT APPLICATION NUMBER: US/09/548,367D
:
: CURRENT FILING DATE: 2000-04-12
:
: PRIOR APPLICATION NUMBER: US 60/155,493
:
: PRIOR FILING DATE: 1998-09-23
:
: PRIOR APPLICATION NUMBER: US 09/404,133
:
: PRIOR FILING DATE: 1999-09-23
:
: PRIOR APPLICATION NUMBER: PCT/US99/20881
:
: PRIOR FILING DATE: 1998-09-23
:
: PRIOR APPLICATION NUMBER: US 60/101,594
:
: PRIOR FILING DATE: 1998-09-24
:
: NUMBER OF SEQ ID NOS: 73
:
: SOFTWARE: PatentIn version 3.1
:
: SEQ ID NO 27
:
: LENGTH: 1278
:
: TYPE: DNA
:
: ORGANISM: Homo sapiens
:
: US-09-548-367D-27

```

Alignment of: us-10-726-967a-1 x US-09-548-367D-27

Alignment segment 1/1: (+)

Quality:	28.00	Escore:	256
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
:::|

1170 CGCTTGCCATGTGCACGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rnp2ndb:US-09-551-853D-27

Sequence documentation:

Sequence 27, Application US/09551853D
Patent No. 6500667
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280L
CURRENT APPLICATION NUMBER: US/09/551,853D
PRIOR FILING DATE: 2000-04-18
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-551-853D-27

Alignment of: us-10-726-967a-1 x US-09-551-853D-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00		Score:
Matching length:	83.33	12	Total length:	266
Matching Percent Similarity:	62.50	16	Matching Percent Identity:	58.33
Total Percent Similarity:	1	43.75	Total Percent Identity:	

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CGCTTGCCATGTGCACGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rnp2ndb:US-09-416-901B-27

Sequence documentation:

Sequence 27, Application US/09416901B
Patent No. 6699671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: PatentIn version 3.1
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-416-901B-27

Alignment of: us-10-726-967a-1 x US-09-416-901B-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00		Score:
Matching length:	83.33	12	Total length:	266
Matching Percent Similarity:	62.50	16	Matching Percent Identity:	58.33
Total Percent Similarity:	1	43.75	Total Percent Identity:	

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CGCTTGCCATGTGCACGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rnp2ndb:US-09-548-376D-27

Sequence documentation:

Sequence 27, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
PRIOR FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-376D-27

Alignment of: us-10-726-967a-1 x US-09-548-376D-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00		Score:
Matching length:	83.33	12	Total length:	266
Matching Percent Similarity:	62.50	16	Matching Percent Identity:	58.33
Total Percent Similarity:	1	43.75	Total Percent Identity:	

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||
1170 CGCTTGCCATGTGCACGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rnp2ndb:US-09-794-927A-27

Sequence documentation:

Sequence 27, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927A

CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-794-927A-27

Alignment of: us-10-726-967a-1 x US-09-794-927A-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Escore:	266
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||.....
1170 CCCTGCCATGTGCACGATGAGTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rmlp2ndb:US-09-548-373D-27

Sequence documentation:

Sequence 27, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/62808
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-373D-27

Alignment of: us-10-726-967a-1 x US-09-548-373D-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Escore:	266
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||.....
1170 CCCTGCCATGTGCACGATGAGTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rmlp2ndb:US-09-795-847B-27

Sequence documentation:

Sequence 27, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/62808
CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847B-27

Alignment of: us-10-726-967a-1 x US-09-795-847B-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Escore:	266
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||.....
1170 CCCTGCCATGTGCACGATGAGTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rmlp2ndb:US-09-869-414-27

Sequence documentation:

Sequence 27, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/62808
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133

Alignment of: us-10-726-967a-1 x US-09-794-925A-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	266
Matching length:	12	Total length:	16
Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgleupPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||.....
1170 CGCTTGCCATGTGCACGATGAGTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnp2ndb:US-09-806-194A-27

Sequence documentation:

Sequence 27, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: Patent In Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-806-194A-27

Alignment of: us-10-726-967a-1 x US-09-806-194A-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	266
Matching length:	12	Total length:	16
Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgleupPro.....LeuArgSerGlyLeuGlyAlaPro 38
|||||.....
1170 CGCTTGCCATGTGCACGATGAGTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnp2ndb:US-09-009-191-3

Sequence documentation:

Sequence 3, Application US/09009191
Patent No. 6319689
GENERAL INFORMATION:
APPLICANT: POWELL, DAVID
APPLICANT: CHAPMAN, CONRAD
APPLICANT: MURPHY, KAY
APPLICANT: SMITH, TRUDI
TITLE OF INVENTION: ASP2
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: RATNER & PRESTIA

STREET: P.O. BOX 980
CITY: VALLEY FORGE
STATE: PA
COUNTRY: USA
ZIP: 19482

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/009,191

FILING DATE: 20-JAN-1998

CLASSIFICATION:

PRIOR APPLICATION DATA:
APPLICATION NUMBER: UK 9701684.4

FILING DATE: 28-JAN-1997

ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F

REGISTRATION NUMBER: 23,031

REFERENCE/DOCKET NUMBER: GH-70368

TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700

TELEFAX: 610-407-0701

TELEX: 846169

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 2370 base pairs

TYPE: nucleic acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: cDNA

US-09-009-191-3

Alignment of: us-10-726-967a-1 x US-09-009-191-3 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	273
Matching length:	12	Total length:	16
Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Sequence name: rnp2ndb:US-09-713-158-1

Sequence documentation:

Sequence 1, Application US/09713158
Patent No. 6361975
GENERAL INFORMATION:
APPLICANT: ZHU, YUAN
APPLICANT: LI, XIAOTONG
APPLICANT: POWELL, DAVID J.
APPLICANT: CHRISTIE, GARY
TITLE OF INVENTION: MOUSE ASPARTIC SECRETASE-2 (MASP-2)
FILE REFERENCE: GP-70660
CURRENT APPLICATION NUMBER: US/09/713,158
CURRENT FILING DATE: 2000-11-15
PRIOR APPLICATION NUMBER: 60/165,800
PRIOR FILING DATE: 1999-11-16
NUMBER OF SEQ ID NOS: 2
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 1
LENGTH: 1506
TYPE: DNA
ORGANISM: MUS MUSCULUS
US-09-713-158-1

1562 AGGGAACCAACCAGATGTCCTCAGGGGCTCTCCA

1527

Sequence name: rnp2ndb:US-09-416-901B-7

Sequence documentation:

Sequence 7, Application US/09416901B
Patent No. 6699671
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280A
CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 72
SOFTWARE: PatentIn version 3.1
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-416-901B-7

Alignment of: us-10-726-967a-1 x US-09-416-901B-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00		Score:	274
Matching length:	12		Total length:	12	
Matching Percent Similarity:	66.67		Matching Percent Identity:	50.00	
Total Percent Similarity:	66.67		Total Percent Identity:	50.00	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCAGATGTCCTCAGGGGCTCTCCA

38

1527

Sequence name: rnp2ndb:US-09-548-376D-7

Sequence documentation:

Sequence 7, Application US/09548376D
Patent No. 6706485
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA

ORGANISM: Mus musculus
US-09-548-376D-7

Alignment of: us-10-726-967a-1 x US-09-548-376D-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00		Score:	274
Matching length:	12		Total length:	12	
Matching Percent Similarity:	66.67		Matching Percent Identity:	50.00	
Total Percent Similarity:	66.67		Total Percent Identity:	50.00	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCAGATGTCCTCAGGGGCTCTCCA

38

1527

Sequence name: rnp2ndb:US-09-794-927A-7

Sequence documentation:

Sequence 7, Application US/09794927A
Patent No. 6727074
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-794-927A-7

Alignment of: us-10-726-967a-1 x US-09-794-927A-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00		Score:	274
Matching length:	12		Total length:	12	
Matching Percent Similarity:	66.67		Matching Percent Identity:	50.00	
Total Percent Similarity:	66.67		Total Percent Identity:	50.00	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCAGATGTCCTCAGGGGCTCTCCA

38

1527

Sequence name: rnp2ndb:US-09-548-373D-7

Sequence documentation:

Sequence 7, Application US/09548373D
Patent No. 6737510
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

```
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/62808
/ CURRENT APPLICATION NUMBER: US/09/548,373D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
/ US-09-548-373D-7
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Alignment of: us-10-726-967a-1 x US-09-548-373D-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	274
Matching length:	12		12	
Matching Percent Similarity:	66.67		50.00	
Total Percent Similarity:	66.67		50.00	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCCAGATGTGTCACAGGGCGCTCCA
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38
1527

Sequence name: rnp2ndb:US-09-795-847B-7

Sequence documentation:

```
/ Sequence 7, Application US/09795847B
/ Patent No. 6753163
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/62808
/ CURRENT APPLICATION NUMBER: US/09/795,847B
/ PRIOR FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
/ US-09-795-847B-7
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	274
Matching length:	12		12	
Matching Percent Similarity:	66.67		50.00	
Total Percent Similarity:	66.67		50.00	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCCAGATGTGTCACAGGGCGCTCCA
```

38
1527

Sequence name: rnp2ndb:US-09-869-414-7

Sequence documentation:

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/ Sequence 7, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Bienkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
/ US-09-869-414-7
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Alignment of: us-10-726-967a-1 x US-09-869-414-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	274
Matching length:	12		12	
Matching Percent Similarity:	66.67		50.00	
Total Percent Similarity:	66.67		50.00	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCCAGATGTGTCACAGGGCGCTCCA
```

38
1527

Sequence name: rnp2ndb:US-09-548-366F-7

Sequence documentation:

```
/ Sequence 7, Application US/09548366F
/ Patent No. 6797487
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280J
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
```

PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-548-366F-7

Alignment of: us-10-726-967a-1 x US-09-548-366F-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Escore:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCCACCGAGATGTGTCACGGGCGCTCCCA 1527

Sequence name: rnp2ndb:US-09-548-368D-7

Sequence documentation:

Sequence 7, Application US/09548368D
Patent No. 6825023
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280C
CURRENT APPLICATION NUMBER: US/09/548,368D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-548-368D-7

Alignment of: us-10-726-967a-1 x US-09-548-368D-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Escore:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCCACCGAGATGTGTCACGGGCGCTCCCA 1527

Sequence name: rnp2ndb:US-09-794-925A-7

Sequence documentation:

Sequence 7, Application US/09794925A
Patent No. 6828117
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
FILE REFERENCE: 29915/6280H
CURRENT APPLICATION NUMBER: US/09/794,925A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-794-925A-7

Alignment of: us-10-726-967a-1 x US-09-794-925A-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Escore:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
1562 AGGGAACCCACCGAGATGTGTCACGGGCGCTCCCA 1527

Sequence name: rnp2ndb:US-09-806-194A-7

Sequence documentation:

Sequence 7, Application US/09806194A
Patent No. 6835565
GENERAL INFORMATION:
APPLICANT: GURNEY, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
APPLICANT: Pharmacia & Upjohn Company
TITLE OF INVENTION: Alzheimer's Disease Secretase
FILE REFERENCE: 6177.P CP
CURRENT APPLICATION NUMBER: US/09/806,194A
CURRENT FILING DATE: 2001-09-17
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 49
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2043
TYPE: DNA
ORGANISM: Mus musculus
US-09-806-194A-7

Alignment of: us-10-726-967a-1 x US-09-806-194A-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Barcode:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyAlaPro	38
1562	AGGGAACCAACCAGATGTGTCAAGGGCGTCCA	1527

Sequence name: rn1p2ndb:US-09-548-372D-27

Sequence documentation:

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; Sequence 27 Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: CURENEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-372D-27

```

Alignment segment 1/1: (-)

Quality:	26.00	EScore:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
:::	:::	
242	AGGAAGGGGTGGGGGCAGCACCC	219

Sequence name: rn1p2ndb:US-09-548-367D-27

Sequence documentation:

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: Sequence 27, Application US/09548367D
: Patent No. 6440698
:
: GENERAL INFORMATION:
: APPLICANT: GURNEY ET AL.
: TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
: TITLE OF INVENTION: THEREOF
: FILE REFERENCE: 29915/6280H
: CURRENT APPLICATION NUMBER: US/09/548,367D
: CURRENT FILING DATE: 2000-04-12
: PRIOR APPLICATION NUMBER: US 60/155,493

```

```

? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: US 09/404,133
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: PCT/US99/20881
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: 09/101,594
? PRIOR FILING DATE: 1998-09-24
? NUMBER OF SEQ ID NOS: 73
? SOFTWARE: PatentIn version 3.1
? SEQ ID NO 27
? LENGTH: 1278
? TYPE: DNA
? ORGANISM: Homo sapiens
US-09-548-367D-27

```

Alignment of: us-10-726-967a-1 x US-09-548-367D-27

Alignment segment 1/1: (-)

Quality:	26.00	272	Score:
Matching length:	8	8	length:
Matching Percent Similarity:	87.50	62.50	Percent Identity:
Total Percent Similarity:	87.50	62.50	Total Percent Identity:
Gaps:	0		

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
	::	
242	AGGAAGGGGTGGGGCAGCACCC	215

Sequence name: rnip2ndb:US-09-551-853D-27

Sequence documentation:

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? Sequence 27:Application US/09551853D
? Patent No. 650067
? GENERAL INFORMATION:
? APPLICANT: GURNEY ET AL.
? TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
? TITLE OF INVENTION: THEREOF
? FILE REFERENCE: 29915/6280L
? CURRENT APPLICATION NUMBER: US/09/551,853D
? CURRENT FILING DATE: 2000-04-18
? PRIOR APPLICATION NUMBER: US 60/155,493
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: US 09/404,133
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: PCT/US99/20881
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: US 60/101,594
? PRIOR FILING DATE: 1998-09-24
? NUMBER OF SEQ ID NOS: 73
? SOFTWARE: PatentIn version 3.1
? SEQ ID NO 27
? LENGTH: 1278
? TYPE: DNA
? ORGANISM: Homo sapiens
? US-09-551-853D-27

```

Alignment of: us-10-726-967a-1 x US-09-551-853D-27

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||:::| | |:::| | |
36

242 AGAAGGGGTGGGGGACACCC

219

Sequence name: rnp2ndb:US-09-416-901B-27

Sequence documentation:

```
; Sequence 27, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-416-901B-27
```

Alignment of: us-10-726-967a-1 x US-09-416-901B-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgserglyLeuGlyGlyAlaPro
|||:::|||||:::|||||
242 AGAAGGGGTGGGGGACACCC
```

38
219

Sequence name: rnp2ndb:US-09-548-376D-27

Sequence documentation:

```
; Sequence 27, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; TITLE OF INVENTION: AND USES
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
```

US-09-548-376D-27

Alignment of: us-10-726-967a-1 x US-09-548-376D-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgserglyLeuGlyGlyAlaPro
|||:::|||||:::|||||
242 AGAAGGGGTGGGGGACACCC
```

38
219

Sequence name: rnp2ndb:US-09-794-927A-27

Sequence documentation:

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; Sequence 27, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927A-27
```

Alignment of: us-10-726-967a-1 x US-09-794-927A-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgserglyLeuGlyGlyAlaPro
|||:::|||||:::|||||
242 AGAAGGGGTGGGGGACACCC
```

38
219

Sequence name: rnp2ndb:US-09-548-373D-27

Sequence documentation:

```
; Sequence 27, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
```

```
FILE REFERENCE: 29915/6280B
CURRENT APPLICATION NUMBER: US/09/548,373D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-548-373D-27
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	272
Matching length:	8			8	
Matching Percent Similarity:	87.50			62.50	
Total Percent Similarity:	87.50			62.50	
Gaps:	0				

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro
|||||
242 AGGAAGGGGTGGGGGACAGACCC
```

38
219

Sequence name: rnp2ndb:US-09-795-847B-27

Sequence documentation:

```
Sequence 27, Application US/09795847B
Patent No. 6753163
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrichson, Robert L.
APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280B
CURRENT APPLICATION NUMBER: US/09/795,847B
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847B-27
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	272
Matching length:	8			8	
Matching Percent Similarity:	87.50			62.50	
Total Percent Similarity:	87.50			62.50	
Gaps:	0				

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro
|||||
242 AGGAAGGGGTGGGGGACAGACCC
```

38
219

Sequence name: rnp2ndb:US-09-869-414-27

Sequence documentation:

```
Sequence 27, Application US/09869414
Patent No. 6790610
GENERAL INFORMATION:
APPLICANT: Bienkowski et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 28341/6280M
CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
LENGTH: 1278
TYPE: DNA
ORGANISM: Homo sapiens
US-09-869-414-27
```

Alignment of: us-10-726-967a-1 x US-09-869-414-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	272
Matching length:	8			8	
Matching Percent Similarity:	87.50			62.50	
Total Percent Similarity:	87.50			62.50	
Gaps:	0				

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro
|||||
242 AGGAAGGGGTGGGGGACAGACCC
```

38
219

Sequence name: rnp2ndb:US-09-548-366F-27

Sequence documentation:

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Sequence 27, Application US/09548366F
Patent No. 6797487
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
FILE REFERENCE: 29915/6280J
CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
```



```

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-27

Alignment of: us-10-726-967a-1 x US-09-548-366F-27
..

Alignment segment 1/1: (-)

Quality: 26.00      Bscore: 272
Matching length: 8      Total length: 8
Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
Total Percent Similarity: 87.50      Total Percent Identity: 62.50
Gaps: 0
```

Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro 38
||||:|||||:|||||
242 AGGAAGGGGTGGGGGCGACACCC 219
```

Sequence name: rnp2ndb:US-09-548-368D-27

Sequence documentation:

```

; Sequence 27, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 28915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-27
```

Alignment of: us-10-726-967a-1 x US-09-548-368D-27

Alignment segment 1/1: (-)

```

Quality: 26.00      Bscore: 272
Matching length: 8      Total length: 8
Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
Total Percent Similarity: 87.50      Total Percent Identity: 62.50
Gaps: 0
```

Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro 38
||||:|||||:|||||
242 AGGAAGGGGTGGGGGCGACACCC 219
```

Sequence name: rnp2ndb:US-09-794-925A-27

```

Sequence documentation:
; Sequence 27, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 28915/6280H
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,501
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925A-27
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-27

Alignment segment 1/1: (-)

```

Quality: 26.00      Bscore: 272
Matching length: 8      Total length: 8
Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
Total Percent Similarity: 87.50      Total Percent Identity: 62.50
Gaps: 0
```

Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro 38
||||:|||||:|||||
242 AGGAAGGGGTGGGGGCGACACCC 219
```

Sequence name: rnp2ndb:US-09-806-194A-27

Sequence documentation:

```

; Sequence 27, Application US/09806194A
; Patent No. 683565
; GENERAL INFORMATION:
; APPLICANT: GURNEY, Mark E.
; APPLICANT: Blenkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-806-194A-27
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Alignment of: us-10-726-967a-1 x US-09-806-194A-27

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
242 AGGAGGGGCTGGGGGCGACGACCC

38
219

Sequence name: rmlp2ndb:US-09-009-191-3

Sequence documentation:

Sequence 3, Application US/09009191
Patent No. 6319689
GENERAL INFORMATION:
APPLICANT: POWELL, DAVID
APPLICANT: CHAPMAN, CONRAD
APPLICANT: MURPHY, KAY
APPLICANT: SMITH, TRUDI
TITLE OF INVENTION: ASP2
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: RATNER & PRESTIA
STREET: P.O. BOX 980
CITY: VALLEY Forge
STATE: PA
COUNTRY: USA
ZIP: 19482
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/009,191
FILING DATE: 20-JAN-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: UK 9701684.4
FILING DATE: 28-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: GH-70368
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
TELEFAX: 610-407-0701
TELEX: 846169
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 2370 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
US-09-009-191-3

Alignment of: us-10-726-967a-1 x US-09-009-191-3 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	279
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
155 AGGAGGGGCTGGGGGCGACGACCC

38
132

rnsp2ndb:ABK91244	-	32.00	40.87	264.32	3252	Human cDNA encoding Memapsin 2.
rnsp2ndb:ABK86641	-	32.00	40.87	264.32	3252	cDNA encoding human memapsin 2.
rnsp2ndb:ABX11591	-	32.00	40.87	264.32	3252	Human partial cDNA encoding mema
rnsp2ndb:ADA74816	-	32.00	40.87	264.32	3252	Human memapsin 2 cDNA. Homo sapi
rnsp2ndb:AAS40938	+	30.00	40.27	271.26	5925	cDNA encoding novel human enzyme
rnsp2ndb:AAI15677	+	28.00	39.71	277.30	1278	Human Asp2 nucleotide sequence c
rnsp2ndb:AAI1714	+	28.00	39.71	277.30	1278	DNA encoding T7-caspase-caspase
rnsp2ndb:AAI17877	+	28.00	39.71	277.30	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:AAI1033	+	28.00	39.71	277.30	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:AAI06751	+	28.00	39.71	277.30	1278	T7-Caspase-Caspase 8-cleavage-hu
rnsp2ndb:AAS1529	+	28.00	39.71	277.30	1278	T7-Caspase-Caspase-8-Human-pro-A
rnsp2ndb:ABL52469	+	28.00	39.71	277.30	1278	T7-caspase-caspase 8 cleavage-hu
rnsp2ndb:ABL94339	+	28.00	39.71	277.30	1278	Human T7-Caspase-Caspase 8 cleav
rnsp2ndb:ADO50435	+	28.00	39.71	277.30	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:ADR75348	+	28.00	39.71	277.30	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:ADU57778	+	28.00	39.71	277.31	1368	DNA sequence for BACE WT R57K.
rnsp2ndb:ADU57786	+	28.00	39.71	277.32	1368	DNA sequence for BACE N-Q R57K.
rnsp2ndb:AAV41697	+	28.00	39.70	277.42	2370	Partial nucleotide sequence of h
rnsp2ndb:AAS40938	-	28.00	39.69	277.59	5925	cDNA encoding novel human enzyme
rnsp2ndb:AAS48279	-	27.00	39.42	280.32	1503	Murine cDNA encoding beta-secret
rnsp2ndb:AAF83845	-	27.00	39.42	280.32	1506	Murine aspartic secretase-2 (MAS)
rnsp2ndb:AAI15664	-	27.00	39.41	280.38	2043	Murine aspartyl protease 2 (a)
rnsp2ndb:AAI1704	-	27.00	39.41	280.38	2043	DNA encoding mouse aspartyl pro
rnsp2ndb:ADU17867	-	27.00	39.41	280.38	2043	Murine aspartyl protease 2(a) [a
rnsp2ndb:ADU1023	-	27.00	39.41	280.38	2043	Murine aspartyl protease 2a (mur
rnsp2ndb:ADU6741	-	27.00	39.41	280.38	2043	Murine aspartyl protease 2a (Asp
rnsp2ndb:AAI1519	-	27.00	39.41	280.38	2043	Murine cDNA encoding Aspartyl pro
rnsp2ndb:AAI52459	-	27.00	39.41	280.38	2043	Murine Asp-2(a) nucleotide sequen
rnsp2ndb:ADU94319	-	27.00	39.41	280.38	2043	Mouse cDNA encoding aspartyl pro
rnsp2ndb:ADU50415	-	27.00	39.41	280.38	2043	Murine aspartyl protease (Asp)-2
rnsp2ndb:ADR75328	-	27.00	39.41	280.38	2043	Murine aspartyl protease (Asp)-2
rnsp2ndb:AAI15677	-	26.00	39.13	283.15	1278	Human Asp2 nucleotide sequence c
rnsp2ndb:AAI1714	-	26.00	39.13	283.15	1278	DNA encoding T7-caspase-caspase
rnsp2ndb:AAI17877	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:AAI1033	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:ADU57786	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:ADU57788	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:ADU57780	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase-8-Human-pro-A
rnsp2ndb:ADU57784	-	26.00	39.13	283.15	1278	T7-caspase-caspase 8 cleavage-hu
rnsp2ndb:ADU57776	-	26.00	39.13	283.15	1278	Human T7-Caspase-Caspase 8 cleav
rnsp2ndb:ADU57782	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:ADU57788	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:ADU57782	-	26.00	39.13	283.15	1278	T7-Caspase-Caspase 8 cleavage-hu
rnsp2ndb:AAV41697	-	26.00	39.12	283.26	2370	Partial nucleotide sequence of h
rnsp2ndb:AAS40939	+	24.00	38.53	288.58	2559	cDNA encoding novel human enzyme

Sequence name: rnsp2ndb:AAI17895

Sequence documentation: ID AAI17895 standard; cDNA, 1287 BP.

XX	AD17895;
XX	10-DEC-2001 (first entry)
XX	Human-Asp 2(b) protein lacking transmembrane domain encoding cDNA.
XX	Human: aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;
KW	Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KM	Amyloid plaque; neuronal loss; proteolytic; neuroprotective;
KM	ss.
XX	Homo sapiens.
OS	Synthetic.
XX	Key
XX	Location/Qualifiers
XX	1..1287
XX	FT CDS
XX	/*tag= a

FT	/product= "Human-Asp 2(b) protein lacking transmembrane
FT	domain"
XX	GB2357767-A.
XX	04-JUL-2001.
XX	22-SEP-2000; 2000GB-00023315.
XX	23-SEP-1999; 99US-00404133.
XX	23-SEP-1999; 99US-0155493P.
XX	23-SEP-1999; 99MO-US020881.
XX	13-OCT-1999; 99US-00416901.
XX	06-DEC-1999; 99US-0169232P.
XX	(PNUA) PHARMACIA & UPJOHN CO.
XX	Blenkewski MJ, Gurney M;
XX	WPI: 2001-444208/48.
XX	P-PSDB; AAE10646.
XX	Polypeptide comprising fragments of human aspartyl protease with amyloid
XX	precursor protein processing activity and alpha-secretase activity, for
XX	identifying modulators useful in treating Alzheimer's disease.
XX	Example 10; Page 137; 187pp; English.
XX	The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX	proteins which lack transmembrane domain or amino terminal domain or
XX	cytoplasmic domain and retains alpha-secretase activity and amyloid
XX	protein precursor (APP) processing activity. The proteins of the
XX	invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX	in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX	activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX	are useful for treating Alzheimer's disease (AD) which causes progressive
XX	dementia with consequent formation of amyloid plaques, neurofibrillary
XX	tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX	for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX	with the substrate under acidic conditions and determining the level of
XX	hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
XX	human Asp 2(b) protein lacking a transmembrane (TM) domain which is
XX	generated by the deletion of the C-terminal TM domain and intracellular
XX	domains of human Asp 2(b) protein
XX	Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
XX	Alignment of: us-10-726-967a-1 x AAI17895 ..
XX	Alignment segment 1/1: (+)
XX	Quality: 104.00
XX	Matching length: 20
XX	Matching Percent Similarity: 100.00
XX	Total Percent Similarity: 100.00
XX	Gaps: 0
XX	Matching length: 20
XX	Matching Percent Identity: 100.00
XX	Total Percent Identity: 100.00
XX	Score: 35.9
XX	22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
XX	64 ACCCAGCAGCGATCCGGCTGCGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
XX	38 oLeuGlyLeu 41
XX	114 CCTGGGGGCTG 123
XX	Sequence name: rnsp2ndb:AAI13276
XX	Sequence documentation: ID AAI13276 standard; cDNA, 1287 BP.
XX	AD13276;

```
XX 23-OCT-2001 (first entry)
XX Human-Asp2 (b) deltatm protein cDNA.
DE
XX
XX Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KM neuroprotective; antisense therapy; Asp2(b) deltatm protein;
KM gene therapy; ss.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1287
XX /tag= a
XX /product= "Human Asp2(b) deltatm protein"
XX
XX WO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX P-PSDB; AAE06891.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 10; Page 166-167; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes Human aspartyl protease 2b (Hu-Asp2b)
XX deltatm protein which is obtained by the deletion of C-terminal
XX transmembrane and intracellular domains of Hu-Asp2b. Human Asp2b has beta
XX -secretase activity
XX
XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD13276 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Quality: 104.00
XX Matching length: 20
XX
XX Score: 35.9
XX Total length: 20
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Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyIleAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
|||||
Sequence name: rngp2ndb: AAD06768
Sequence documentation:
ID AAD06768 standard; cDNA; 1287 BP.
XX
XX AAD06768;
XX
XX 10-AUG-2001 (first entry)
XX
XX Human aspartyl protease 2 (b) delta TM cDNA.
XX
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KM Alzheimer's disease; antiAlzheimer's; aspartyl protease 2; Asp 2;
KM beta-secretase; chromosome 11q23.3-24.1; mutant; ss.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1287
XX /tag= a
XX /product= "Human aspartyl protease 2 (b) delta TM"
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX WPI; 2001-290516/30.
XX P-PSDB; AAE02598.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 10; Page 165-166; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human aspartyl protease 2
XX (Asp 2) (b) delta TM cDNA. The Asp 2 gene from which it is derived is
XX located on chromosome 11q23.3-24.1. The Asp 2 has beta-secretase protease
XX activity
XX
XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06768 ..
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Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22	ThrglnHieGlyIleArgleuProleuArgSergIleuGlyAlaIpr	38
64	ACCCAGCAGCGCATCCGCTGCCCTGCCGACGCGCTGGGGGCGCCCC	113
38	oleuGlyIleu	41
114	CCTGGGGGCTG	123

Sequence name: rngp2ndb:AA511547

Sequence documentation:

ID AA511547 standard; cDNA; 1287 BP.

AC AA511547;

XX 24-OCT-2001 (first entry)

DE Human cDNA encoding Human-pro-Asp 2(b) delta TM.

XX Human, Aspartyl protease; beta-secretase; neurotrophic; ASP2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM; ss; mutant.

OS Homo sapiens.

XX Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1287

FT /tag= a

FT /product= "Human-pro-Asp 2(b) delta TM"

XX WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-1B000798.

XX 09-MAY-2001; 2001WO-1B000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Blenkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

XX protease 2, lacking Asp2 transmembrane domain and retaining beta

XX secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Disclosure; Page 166-167; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of

XX mammalian aspartyl protease (Asp2) protein which lacks the Asp2

XX transmembrane domain and the Asp2 protein, and where the polypeptide and

XX the fragment retain the beta-secretase activity of the mammalian Asp2

XX protein. The invention also details polynucleotides for the Asp proteins

XX and vectors expressing them, and a polypeptide (isoform of amyloid

CC protein precursor (APP) comprising the amino acid sequence of an APP or
CC its fragment containing an APP cleavage site recognizable by a mammalian
CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (Abeta) peptide production. APP is also useful in designing
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
CC associated with increased levels of Abeta processing is useful in assays
CC relating the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence encodes Human-pro-Asp 2(b) delta TM
CC protein, which lacks the C-terminal transmembrane domain

XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511547

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22	ThrglnHieGlyIleArgleuProleuArgSergIleuGlyAlaIpr	38
64	ACCCAGCAGCGCATCCGCTGCCCTGCCGACGCGCTGGGGGCGCCCC	113
38	oleuGlyIleu	41
114	CCTGGGGGCTG	123

Sequence name: rngp2ndb:ABL52487

Sequence documentation:

ID ABL52487 standard; cDNA; 1287 BP.

XX ABL52487;

XX 16-JUL-2002 (first entry)

XX Human Asp-2(b)deltaTM nucleotide sequence SEQ ID NO:50.

XX Human, Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

XX chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1287

XX /tag= a

XX /product= "Human Asp-2(b)delta TM"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99US-00416901.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.
 XX (PHAA) PHARMACIA & UPJOHN CO.
 XX
 XX
 PI Bienkowski MJ, Gurney M,
 XX
 DR WPI; 2002-397167/43.
 DR P-PSDB; ABB878607.
 XX
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
 XX
 XX Example 10; Page 137; 182pp; English.
 XX
 XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC -coding strand complementary to a defined 1804 nucleotide sequence (see
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589); (4) a vector (IV)
 CC comprising (III) or (III') and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes human Asp-2(b)deltaTM, which is given in an example from
 CC the present invention
 XX
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ABL52487 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

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22 ThrGlnH1G1Y1IeArgLeuProLeuArgSerG1YLeuG1YAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTCGGCGACAGCGCTCGGGGGGCGCC 113
38 olendlyleu
114 CCGGGGGCGCTG
123

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Sequence name: rngp2ndb:ADJ94362

Sequence documentation:
 ID ADJ94362 standard; cDNA; 1287 BP.
 XX
 AC ADJ94362;
 XX
 DT 03-JUN-2004 (first entry)
 XX
 DE Human-pro-Asp-2(b)deltaTM cDNA.
 XX
 KW Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 KW neurotropic; neuroprotective; amyloid beta; mutant.
 XX
 XX Homo sapiens.
 OS Synthetic.
 XX
 XX US6706485-B1.
 XX
 PD 16-MAR-2004.
 XX
 PF 12-APR-2000; 2000US-00548376.
 XX
 XX 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 XX
 DR WPI; 2004-236722/22.
 DR P-PSDB; ADJ94363.
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.
 XX
 XX Example 10; SEQ ID NO 50; 109pp; English.
 XX
 XX The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.
 XX
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADJ94362 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTCGCGACGCGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rngp2ndb:AD050458

Sequence documentation:

```
ID AD050458 standard; DNA; 1287 BP.
XX
AC AD050458;
XX
DT 29-JUL-2004 (first entry)
XX
DE Human Asp2(b) deltaTM mutant DNA.
XX
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KM Alzheimer's disease; gene therapy; human; mutant; gene; ds.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..1287
FT /*tag= a
FT /*product= "Human Asp2(b) mutant protein"
XX
PN US6737510-B1.
XX
PD 18-MAY-2004.
XX
PF 12-APR-2000; 2000US-00548373.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-015493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heintzkeon RL, Parodi LA, Yan R;
XX
DR WPI; 2004-387112/36.
XX
DR P-PSDB; AD050459.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
XX Example 10; SEQ ID NO 50; 108bp; English.
XX
PS The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is human
CC Asp2(b) mutant DNA. This sequence is used to illustrate the method of the
CC invention.
XX
SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
```

Alignment of: us-10-726-967a-1 x AD050458 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching Length:	20		20	
Matching Percent	100.00		100.00	
Total Percent	100.00		100.00	
Gaps:	0		0	

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTCGCGACGCGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rngp2ndb:ADR75371

Sequence documentation:

```
ID ADR75371 standard; DNA; 1287 BP.
XX
AC ADR75371;
XX
DT 18-NOV-2004 (first entry)
XX
DE Human Asp2(b) deltaTM mutant DNA.
XX
KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; human; mutant; gene; ds.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..1287
FT /*tag= a
FT /*product= "Human Asp2(b) mutant protein"
XX
PN US2004166507-A1.
XX
PD 26-AUG-2004.
XX
PF 28-AUG-2003; 2003US-00652045.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-015493P.
PR 13-OCT-1999; 99US-00416901.
XX
PA (GURN/) GURNEY M E.
PA (BIEN/) BIENKOWSKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
PI Gurney ME, Bienkowski MJ, Heintzkeon RL, Parodi LA, Yan R;
XX
DR WPI; 2004-624916/60.
XX
DR P-PSDB; ADR75372.
XX
PT Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.
XX
XX Example 10; SEQ ID NO 50; 107bp; English.
XX
PS The invention relates to nucleic acid sequences encoding aspartyl
CC protease (asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
```

CC chromosome identification as they can hybridise with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assays for detecting Hu-Asp polypeptide expression. The
 CC present sequence is the human Asp2(b)delatm mutant DNA. This sequence is
 CC used to illustrate the method of the invention.

XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75371 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22  ThGlnHisGlylleaArgLeuProLeuArgSerGlyLeuGlyAlaLar 38
    |||||
64  ACCGACGACGCGCATCCGGCTGCCCTGCCGACGCGGCGGCGGCGCC 113
    |||||
38  oLeuGlyLeu 41
    |||||
114  CCGGGGGGCTG 123

```

Sequence name: rngp2ndb:AAA15670

Sequence documentation:

ID AAA15670 standard; DNA; 1302 BP.

AC AAA15670;

XX 15-SEP-2003 (revised)

DT 06-AUG-2003 (revised)

DT 03-AUG-2000 (first entry)

XX Human-pro-Asp-2(a)-delatm nucleotide sequence.

KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; ss;

KM Alzheimer's disease; beta secretase site; human-pro-Asp-2(a)-delatm.

XX Homo sapiens.

OS Enterobacteria phage T7.

XX Chimeric.

XX W0200017369-A2.

XX 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heintzson RL, Parodi LA, Yan R;

XX WPI; 2000-303209/26.

XX P-PsDB; AAY88433.

XX New enzyme designated human aspartase useful in research into Alzheimer's

XX disease is capable of cleaving amyloid protein precursor at the beta

XX secretase site to produce amyloid beta peptide.

XX Example 9; Fig 8; 183pp; English.

XX This sequence represents a modified version of the human aspartase 2

CC (Asp2) nucleotide sequence. The sequence is used in the bacterial
 CC expression of human Asp2L. The invention relates to a protease (e.g.
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
 CC protein (APP). The protease contains a sequence encoding the amino acid
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
 CC amino acids. When mutated the APP gene causes an autosomal dominant form
 CC of Alzheimer's disease. APP localises to the cell surface membrane and
 CC have a single C-terminal transmembrane domain. Proteolytic processing of
 CC APP produces the amyloid beta protein, which is possibly very important
 CC in Alzheimer's disease. The invention includes a nucleotide sequence
 CC encoding the protease, a vector containing the nucleotide sequence, and a
 CC cell line comprising the vector. Methods for screening for inhibitors of a
 CC beta secretase protein and nucleotide sequences and the methods for
 CC identifying inhibitors of the protease, are useful in the treatment of
 CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to
 CC correct OS field.) (Updated on 15-SEP-2003 to standardise OS field)

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15670 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22  ThGlnHisGlylleaArgLeuProLeuArgSerGlyLeuGlyAlaLar 38
    |||||
4  ACTGACGATGTATTCGTGCGACGCGTCTGCTGCTCC 53
    |||||
38  oLeuGlyLeu 41
    |||||
54  ACTGGGCTCTG 63

```

Sequence name: rngp2ndb:AAA11713

Sequence documentation:

ID AAA11713 standard; DNA; 1302 BP.

AC AAA11713;

XX 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

XX DNA encoding T7-human aspartyl protease 2a delatm (low GC).

KW Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

XX beta-secretase; Alzheimer's disease; db.

XX Homo sapiens.

OS Enterobacteria phage T7.

XX Key

FT 1.1302

FT /product= "T7-Aspartyl protease-2a delta TM (low GC)"

XX W0200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

22 ThrGlnHisGlyIleAArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 4 ACTCAGCATGGTATTCTGTCACCTGCGTAGCGGTCTGGGTGCTCC 53
 38 OLeuGlyLeu 41
 |||||
 54 ACTGGGTCTG 63

Sequence name: rnp2ndb:AAD13032

Sequence documentation:

ID AAD13032 standard; cDNA, 1302 BP.

AC AAD13032;

DT 23-OCT-2001 (first entry)

DE Human-pro-Asp2(a) deltaTM (low GC) protein cDNA.

KW Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
 KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
 KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
 KW neuroprotective; antisense therapy; pro-Asp2(a) deltaTM protein;
 KW gene therapy; ss.

OS Homo sapiens.
 OS Synthetic.

FT Key Location/Qualifiers
 FT CDS 1..1302
 FT /*tag= a
 FT /product= "Human-pro-Asp2(a) deltaTM (low GC) protein"

MO200150829-A2.

PD 19-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000799.

PR 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

DR P-PSDB; AAE06870.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

PS Example 9; Fig 8; 185pp; English.

XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.
 CC Human aspartyl proteases can act as beta-secretase proteases useful for
 CC treating Alzheimer's disease. APP isoforms are useful for identifying
 CC modulators of amyloid-beta peptide production, for use in designing
 CC therapeutics for the treatment and prevention of Alzheimer's disease,
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
 CC and neuronal loss. APP isoforms are also used in methods for identifying
 CC inhibitors and modulators of human Asp2 activity. The invention relates
 CC to a method for identifying agents that modulate the activity of human
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
 CC as a means to screen in cellular assays for the inhibitors of beta- and
 CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in

CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
 CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
 CC The present cDNA sequence encodes Human-pro-aspartyl protease 2a (Asp2a)
 CC deltaTM (low GC) protein which is obtained by the deletion of C-terminal
 CC transmembrane domain and change of degenerate codons bases in 15 amino
 CC acid positions from G/C to A/T in the Hu-Asp2a. Human Asp2a has beta-
 CC secretase activity
 CC
 SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13032 ..

Alignment segment 1/1: (+)

Matching	Percent	Length:	Quality:	Score:
100.00	100.00	20	104.00	35.9
Total	Percent	Similarity:	100.00	100.00
0	Total	Percent	Identity:	100.00

Alignment:

22 ThrGlnHisGlyIleAArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 |||||
 4 ACTCAGCATGGTATTCTGTCACCTGCGTAGCGGTCTGGGTGCTCC 53
 38 OLeuGlyLeu 41
 |||||
 54 ACTGGGTCTG 63

Sequence name: rnp2ndb:AAD6750

Sequence documentation:

ID AAD6750 standard; cDNA, 1302 BP.

AC AAD6750;

DT 10-AUG-2001 (first entry)

DE Human-pro-Asp-2(a) deltaTM protein cDNA.

KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
 KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
 KW beta-secretase; Asp-2a delta TM; ss.

OS Homo sapiens.
 OS Synthetic.

FT Key Location/Qualifiers
 FT CDS 1..1302
 FT /*tag= a
 FT /product= "Human-pro-Asp-2(a) delta TM protein"

MO200123533-A2.

PD 05-APR-2001.

PF 22-SEP-2000; 2000WO-US026080.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney M, Bienkowski MJ;

XX WPI; 2001-290516/30.

DR P-PSDB; AAE02592.

XX Enzymes that cleave the alpha-secretase site of the amyloid precursor

PT protein, useful for the treatment of Alzheimer's disease.

XX PS Example 9; Page 155; 189pp; English.

XX CC The present invention relates to enzymes for cleaving the alpha-
 CC secretase site of the amyloid precursor protein (APP) and methods of
 CC identifying those enzymes. The methods may be used to identify enzymes
 CC that may be used to cleave the alpha-secretase cleavage site of the APP
 CC protein. The enzymes may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is a cDNA encoding human
 CC Aspartyl protease 2a (Asp-2a) deltatm protein which is obtained by
 CC deleting the transmembrane domain and adding a T7 tag at the N-terminal
 CC end. This sequence has beta-secretase protease activity. Note: The
 CC present sequence is also shown in figure 8 of the specification, but
 CC lacks nucleotides at its 3' end. This sequence shown in figure 8 has a
 CC stop codon at its 3' end

XX SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06750 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38
4 ACTCAGCAGTGTATGCTGTGCACCTGCGTACGGCTGTGGGTGCTCC 53
38 OleuGlyLeu
|||||
54 ACTGGGTCTCG
|||
63

```

Sequence name: rmgp2ndb:AA511528

Sequence documentation:
 ID AA511528 standard; cDNA; 1302 BP.

XX AC AA511528;

XX DT 24-OCT-2001 (first entry)

XX DE Human cDNA encoding Human-pro-Asp 2(a) delta TM (low GC).

XX KW Human; Aspartyl protease; beta-secretase; neurotropic; ASP2;
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KW amyloid-beta; Abeta; ss; Human-pro-Asp 2(a) delta TM (low GC).

XX OS Homo sapiens.

OS Synthetic.

XX FH Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a

FT /product= "Human-pro-Asp 2(a) delta TM (low GC)"

XX PN W0200149098-A2.

XX 12-JUL-2001.

XX PD 09-MAY-2001; 2001WO-IB000798.

XX PF 09-MAY-2001; 2001WO-IB000798.

XX PR 09-MAY-2001; 2001WO-IB000798.

XX PA (BIEN/) BIENKOWSKI M J.

XX PA (GURN/) GURNEY M E.

XX PA (HEIN/) HEINRIKSON R L.

XX PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX BIENKOWSKI MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX WPI; 2001-502549/55.
 DR P-PSDB; AAU06614.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.

XX PS Example 9; Fig 8; 185pp; English.

XX CC The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes Human-pro-Asp 2(a) delta TM
 CC (low GC), a synthetic version of Asp 2(a) whose GC content has been
 CC altered to facilitate expression in E.coli

XX SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511528 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38
4 ACTCAGCAGTGTATGCTGTGCACCTGCGTACGGCTGTGGGTGCTCC 53
38 OleuGlyLeu
|||||
54 ACTGGGTCTCG
|||
63

```

Sequence name: rmgp2ndb:AB152468

Sequence documentation:
 ID AB152468 standard; cDNA; 1302 BP.

XX AC AB152468;

XX DT 16-JUL-2002 (first entry)

XX DE Human-pro-Asp-2(a) deltatm (low GC) nucleotide sequence SEQ ID NO.25.

KM Human: Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
 KM amyloid precursor protein; APP; gene; ss.
 XX Homo sapiens.
 OS
 FH Key Location/Qualifiers
 FT CDS 1..1302
 FT /tag= a
 FT /product= "human-pro-Asp-2(a)deltaTM (low GC)"
 XX
 PN GB2367060-A.
 PD 27-MAR-2002.
 PF 29-OCT-2001; 2001GB-00025934.
 XX
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 PR 22-SEP-2000; 2000GB-00023315.
 XX
 PA (PHMA) PHARMACIA & UPJOHN CO.
 PI Bienkowski MJ, Gurney M;
 DR WPI; 2002-397167/43.
 DR P-PSDB; ABB78601.
 XX
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
 XX
 PS Example 9; Fig 8; 182pp; English.
 XX
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC AB552456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-67 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 CC comprising (III) or (III') and (5) a host cell (V) transformed or
 CC transfected with (III), (III'), and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes human-pro-Asp-2(a)deltaTM (low GC), which is given in an
 CC example from the present invention
 XX
 SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ABLS2468 ..
 Alignment segment 1/1: (+)
 Quality: 104.00 Score: 35.9
 Matching length: 20 Total length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0
 Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGIYVAlApr 38
 |||||
 4 ACTCAGCAGTCGATTCGTCTGCACTGCGCTAGCGGCTGGGAGTCTCC 53
 |||||
 38 oLeuGlyLeu 41
 |||||
 54 ACTGGGCTCTG 63
 |||||
 Sequence name: rngp2nrb:ADU94337
 ID ADU94337 standard; cDNA; 1302 BP.
 XX
 AC ADU94337;
 XX
 DT 03-JUN-2004 (first entry)
 XX
 DE Human-pro-Asp-2(a)deltaTM (low GC) cDNA.
 XX
 KM Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 KM notropic; neuroprotective; amyloid beta; mutant.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN US6706485-B1.
 XX
 PD 16-MAR-2004.
 XX
 PF 12-APR-2000; 2000US-00548376.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHMA) PHARMACIA & UPJOHN CO.
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2004-236722/22.
 DR P-PSDB; ADU94338.
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.
 XX
 PS Example 9; SEQ ID NO 25; 109pp; English.
 XX
 CC The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptide, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC lact 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The

CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing, are useful for treating or preventing
CC Alzheimer's disease. The present sequence encodes an aspartyl protease
CC mutant construct (e.g. lacking a transmembrane domain and/or including a
CC caspase cleavage site) used to investigate the cleavage activity of Asp2
CC proteins.

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94337 ..

Alignment segment 1/1: (+)

Matching	Quality: 104.00	Score: 35.9
Percent Similarity: 100.00	Total length: 20	Percent Identity: 100.00
Total Percent Similarity: 100.00	Gaps: 0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGACAGGATTCGTCTGCGACTGCGTACGGGTCTGGGTGCTCC 53
38 OLeuGlyLeu 41
54 ACTGGGTCTG 63
```

Sequence name: rngp2ndb:AD050433

Sequence documentation:

ID AD050433 standard; DNA; 1302 BP.

AC AD050433;

DT 29-JUL-2004 (first entry)

DE Human-pro-Asp-2(a)delatm mutant DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KW Alzheimer's disease; gene therapy; human; mutant; ds.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1302 /tag= a /product= "Human-pro-Asp-2(a)delatm mutant protein"

PN US6737510-B1.

PD 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

XX 24-SRP-1998; 98US-0101594P.

PR 23-SRP-1999; 99US-00404133.

PR 23-SRP-1999; 99US-0155493P.

PR 23-SRP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX MPI; 2004-387112/36.

DR P-PDB; AD050434.

XX

PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.

XX Example 9; SEQ ID NO 25; 108bp; English.

CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is human
CC -pro-Asp-2(a)delatm mutant DNA. This sequence is used to illustrate the
CC method of the invention.

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050433 ..

Alignment segment 1/1: (+)

Matching	Quality: 104.00	Score: 35.9
Percent Similarity: 100.00	Total length: 20	Percent Identity: 100.00
Total Percent Similarity: 100.00	Gaps: 0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGACAGGATTCGTCTGCGACTGCGTACGGGTCTGGGTGCTCC 53
38 OLeuGlyLeu 41
54 ACTGGGTCTG 63
```

Sequence name: rngp2ndb:ADR75346

Sequence documentation:

ID ADR75346 standard; DNA; 1302 BP.

AC ADR75346;

DT 18-NOV-2004 (first entry)

DE Human-pro-Asp-2(a)delatm mutant DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KW chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1302 /tag= a /product= "Human-pro-Asp-2(a)delatm mutant protein"

PN US2004166507-A1.

PD 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

XX 24-SRP-1998; 98US-0101594P.

PR 23-SRP-1999; 99US-00404133.

PR 23-SRP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWSKI M J.

XX

PA (HEIN/) HEINRIKSON R. L.
 PA (PARO/) PARODI L. A.
 PA (YANR/) YAN R.
 PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2004-624916/50.
 DR P-PSDB; ADR75347.
 XX
 PT Novel purified/isolated polynucleotide encoding polypeptide having
 PT aspartyl protease activity involved in processing amyloid precursor
 PT protein into amyloid beta, useful in identifying agent decreasing
 PT activity of aspartyl protease.

Example 9; SEQ ID NO 25; 107pp; English.

CC The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (Asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that
 CC decreases the protease activity of the Asp. Asp DNA is useful in
 CC chromosome identification as they can hybridize with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
 CC present sequence is the human-pro-Asp-2(a) deltaTM mutant DNA. This
 CC sequence is used to illustrate the method of the invention.

XX SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75346 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Score:
20	104.00	35.9
Percent Similarity: 100.00	Total length: 20	
Total Percent Identity: 100.00	Matching Percent Identity: 100.00	
Gaps: 0	Total Percent Identity: 100.00	

Alignment:

```

22  TTTGTHHIGLYTLeaTgLeuProleuAaGSeRgLYLeuGlyYALAaR 38
    |||||
4  ACTCAGCATGCTATTCGTCGCCACTGCGGTGCGGTGCGGTGCGTCC 53
    |||||
38  oLeuGlyLeu 41
54  ACTGGGCTCTG 63

```

Sequence name: rngp2ndb:AA511733

Sequence documentation:

ID AA511733 standard; DNA; 1305 BP.

XX AA511733;

XX 09-SEP-2004 (revised)

XX 24-OCT-2001 (first entry)

XX DNA encoding human aspartyl protease 2b deltaTM (His)6.

KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;

KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KW beta-secretase; Alzheimer's disease; ds.

XX Homo sapiens.

OS Unidentified.

XX Key

FT CDS Location/Qualifiers

FT /tag= a
 FT /product= "Human Aspartyl protease-2b delta TM (His)6"
 FT /transl_except= (pos:1285..1287, aa:His)
 FT /transl_except= (pos:1288..1290, aa:His)
 FT /transl_except= (pos:1291..1293, aa:His)
 FT /transl_except= (pos:1294..1296, aa:His)
 FT /transl_except= (pos:1297..1299, aa:His)
 FT /transl_except= (pos:1300..1302, aa:His)

XX W0200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R. L.

XX (PARO/) PARODI L. A.

XX (YANR/) YAN R.

XX Bienkowiak MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502548/55.

XX P-PSDB; AA007220.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

XX protease 2, lacking Asp2 transmembrane domain and retaining beta

XX secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Claim 149; Page 168-169; 185pp; English.

CC The invention relates to a novel purified polypeptide comprising a
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl terminus of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
 CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta
 CC (Abeta) peptide production, for use in designing therapeutics for the
 CC treatment or prevention of Alzheimer's disease. Probes and primers
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The
 CC present sequence represents the coding sequence of human Asp-2b delta
 CC TM(His)6 construct which has a 6 histidine tag and lacks the
 CC transmembrane domain. This construct was used for bacterial expression
 CC and purification of human Asp2b

CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key

XX SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AA511733 ..

XX Alignment segment 1/1: (+)

Matching Length:	Quality:	Score:
20	104.00	35.9
Percent Similarity: 100.00	Total length: 20	
Total Percent Identity: 100.00	Matching Percent Identity: 100.00	
Gaps: 0	Total Percent Identity: 100.00	

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTCCGCGACGGCGCTGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rngp2ndb:AAD17896

Sequence documentation:
ID AAD17896 standard; cDNA; 1305 BP.
XX
AC AAD17896;
XX
DT 10-DEC-2001 (first entry)
XX
DE Human-Asp 2(b) lacking TM domain (His)6 protein encoding cDNA.
XX
KW Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective;
KW ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..1305
FT /tag= a
FT /product= "Human-Asp 2(b) lacking transmembrane domain
FT (His)6 protein"
FT /transl_except= (pos:1285..1287, aa:His)
FT /transl_except= (pos:1288..1290, aa:His)
FT /transl_except= (pos:1291..1293, aa:His)
FT /transl_except= (pos:1294..1296, aa:His)
FT /transl_except= (pos:1297..1299, aa:His)
FT /transl_except= (pos:1300..1302, aa:His)
XX
PN GB2357767-A.
XX
PD 04-JUL-2001.
XX
PF 22-SEP-2000; 2000GB-00023315.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Bienkowski MJ, Gurney M;
XX
DR WPI; 2001-444208/48.
DR P-PSDB; AAE10647.
XX
PT Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
PS Example 10; Page 138; 187pp; English.
XX
CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
```

```
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
CC human Asp 2(b) lacking a transmembrane (TM) domain (His)6 protein which
CC is generated from human Asp 2(b) protein by the deletion of its C-
CC terminal TM domain and addition of hexa-histidine tag at its C-terminus
XX
SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
```

Alignment of: us-10-726-967a-1 x AAD17896 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	35.9
Matching Length:	20		Total Length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTCCGCGACGGCGCTGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rngp2ndb:AAD13277

Sequence documentation:

ID AAD13277 standard; cDNA; 1305 BP.

XX AAD13277;

DT 23-OCT-2001 (first entry)

DE Human-Asp2(b) deltaTM (His)6 protein cDNA.

KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;

KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;

KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;

KW neuroprotective; antisense therapy; Asp2(b) deltaTM (His)6 protein;

KW gene therapy; ss.

OS Homo sapiens.

OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1305

FT /tag= a

FT /product= "Human Asp2(b) deltaTM (His)6 protein"

XX WO200150829-A2.

PD 19-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000799.

PR 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

DR WPI: 2001-483072/52.
DR P-PSDB; AAE06892.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.

XX Example 10; Page 168-169; 185pp; English.

CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present cDNA sequence encodes Human aspartyl protease 2b (Hu-Asp2b)
CC deltaTM (His)6 protein which is obtained by the deletion of C-terminal
CC transmembrane domain and addition of a hexa-Histidine tag at the C-
CC terminal end of Hu-Asp2b. Human Asp2b has beta-secretase activity

XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13277 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGCTG
|||||
123
```

Sequence name: rngp2ndb: AAD06769

Sequence documentation:

ID AAD06769 standard; cDNA; 1305 BP.

AC AAD06769;

DT 10-AUG-2001 (first entry)

DE Human aspartyl protease 2 (b) delta TM (His)6 cDNA.

KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; antialzheimer's; aspartyl protease 2; Asp 2;
KW beta-secretase; chromosome 11q23.3-24.1; mutant; ss.

XX Homo sapiens.

OS Synthetic.

OS

OS

OS

OS

OS

OS

Key Location/Qualifiers

FT 1..1305

FT /tag= a

FT /product= "Human aspartyl protease 2 (b) delta TM (His)6"
FT /transl_except= (pos:1285..1287, aa:His)
FT /transl_except= (pos:1288..1290, aa:His)
FT /transl_except= (pos:1291..1293, aa:His)
FT /transl_except= (pos:1294..1296, aa:His)
FT /transl_except= (pos:1297..1299, aa:His)
FT /transl_except= (pos:1300..1302, aa:His)

XX WO200123533-A2.

XX 05-APR-2001.

XX 22-SEP-2000; 2000NO-US026080.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99NO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney M, Bienkowski MJ;

XX WPI: 2001-290516/30.

XX P-PSDB; AAE02599.

XX Example 10; Page 167-168; 189pp; English.

CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human aspartyl protease 2
CC (Asp 2) (b) delta TM (His)6 cDNA. The Asp 2 gene from which it is derived
CC is located on chromosome 11q23.3-24.1. Asp 2 has beta-secretase protease
CC activity

XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06769 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGCTG
|||||
123
```

Sequence name: rngp2ndb: AAS11548

Sequence documentation:

ID AAS11548 standard; cDNA; 1305 BP.

AC AAS11548;

DT 24-OCT-2001 (first entry)

DE Human cDNA encoding Human-pro-Asp 2 (b) delta TM (His)6.

CC proteolytic activity; (2) a purified polynucleotide (iii) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC ABUS2436) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (iii') comprising a sequence that
 CC hybridises under stringent conditions to (iii) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (iv)
 CC comprising (iii) or (iii'); and (5) a host cell (v) transformed or
 CC transfected with (iii'), (iii') and/or (iv). The hu-Asp1 protease
 CC substrate (i) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (ii) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes human Asp-2(b)deltaTM(His)6, which is given in an
 CC example from the present invention

XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABUS2436 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Basecore:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTCCGACGCGCGCTGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

```

Sequence name: rngp2ndb.ADJ94364

Sequence documentation:

ID ADJ94364 standard; cDNA; 1305 BP.

XX AC ADJ94364;

XX DT 03-JUN-2004 (first entry)

XX DE Human-pro-Asp-2(b)deltaTM(His)6 cDNA.

XX KM Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX KM neurotropic; neuroprotective; amyloid beta; mutant.

XX OS Homo sapiens.

XX OS Synthetic.

XX PN US6706485-B1.

XX PD 16-MAR-2004.

XX PF 12-APR-2000; 2000US-00548376.

XX PR 24-SEP-1998; 98US-0101594P.

XX PR 23-SEP-1999; 99US-00404133.

XX PR 23-SEP-1999; 99US-0155493P.

XX PR 13-OCT-1999; 99US-00416901.

XX PA (PHMA) PHARMACIA & UPJOHN CO.

XX DT

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 XX WPI; 2004-236722/22.
 DR P-PSDB; ADJ94365.

PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.

XX Example 10; SEQ ID NO 52; 109pp; English.

XX The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5), aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and protein
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.

XX SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94364 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Basecore:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

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22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTCCGACGCGCGCTGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123

```

Sequence name: rngp2ndb.ADO50460

Sequence documentation:

ID ADO50460 standard; DNA; 1305 BP.

XX AC ADO50460;

XX DT 29-JUN-2004 (first entry)

```

DE Human Asp2 (b) deltatm(His)6 DNA.
XX
XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; gene; ds.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1305
XX /*tag= a
XX /product= "Human Asp-2(b) deltatm(His)6 protein"
XX /transl_except= (pos:1385..1387, aa:His)
XX /transl_except= (pos:1388..1390, aa:His)
XX /transl_except= (pos:1391..1393, aa:His)
XX /transl_except= (pos:1394..1396, aa:His)
XX /transl_except= (pos:1397..1399, aa:His)
XX /transl_except= (pos:1400..1402, aa:His)
XX
XX US6737510-B1.
XX
XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX WPI; 2004-387112/36.
XX P-PSDB; ADO50461.
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
XX involved in processing amyloid precursor protein into amyloid beta,
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease.
XX
XX Example 10; SEQ ID NO 52; 108bp; English.
XX
XX The invention relates to a method for identifying an agent that decreases
XX the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX provides enzyme and enzymatic procedures for cleaving the beta secretase
XX cleavage site of the amyloid precursor protein (APP). The invention is
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease. It is also useful in gene therapy. The present sequence is human
XX Asp2(b) deltatm(His)6 DNA. This sequence is used to illustrate the method
XX of the invention.
XX
XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADO50460 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Quality: 104.00 Escore: 35.9
XX Matching length: 20 Total length: 20
XX Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
XX Total Percent Similarity: 100.00 Total Percent Identity: 100.00
XX Gaps: 0
XX
XX Alignment:
XX 22 TTTGTHHISGLYIIEATGTEULEUATGSERGYLEUENGLYALAPR 38
XX |||||
XX 64 ACCGAGCACGGCATCCGGCTGCGCCGACGCGGCTGGGGGCGCCCC 113
XX |||||
XX 38 oleuGLYleu 41

```

```

|||
114 CCTGGGCGCTG 123
Sequence name: rngp2ndb:ADR75373
Sequence documentation:
ID ADR75373 standard; DNA; 1305 BP.
XX
XX ADR75373;
XX
XX 18-NOV-2004 (first entry)
XX
XX Human Asp2 (b) deltatm(His)6 DNA.
XX
XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KW chromosome identification; Alzheimer's disease; human; gene; ds.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1305
XX /*tag= a
XX /product= "Human Asp-2(b) deltatm(His)6 protein"
XX /transl_except= (pos:1285..1287, aa:His)
XX /transl_except= (pos:1288..1290, aa:His)
XX /transl_except= (pos:1291..1293, aa:His)
XX /transl_except= (pos:1294..1296, aa:His)
XX /transl_except= (pos:1297..1299, aa:His)
XX /transl_except= (pos:1300..1302, aa:His)
XX
XX US2004166507-A1.
XX
XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 13-OCT-1999; 99US-00416901.
XX
XX (GURN/) GURNEY M B.
XX (BIEN/) BIENKOWSKI M J.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX WPI; 2004-624916/60.
XX P-PSDB; ADR75374.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
XX aspartyl protease activity involved in processing amyloid precursor
XX protein into amyloid beta, useful in identifying agent decreasing
XX activity of aspartyl protease.
XX
XX Example 10; SEQ ID NO 52; 107bp; English.
XX
XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridize with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying candidates to modulate the progression of
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX in diagnostic assay for detecting Hu-Ap polypeptide expression. The
XX present sequence is the human Asp2(b) deltatm(His)6 DNA. This sequence is
XX used to illustrate the method of the invention.

```


PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R,
 DR WPI; 2001-502548/55.
 XX P-PSDB; AAU07211.
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 XX activity.
 PS Example 9; Fig 6; 185pp; English.
 XX
 CC The invention relates to a novel purified polypeptide comprising a
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl terminus of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
 CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta
 CC (Abeta) peptide production, for use in designing therapeutics for the
 CC treatment or prevention of Alzheimer's disease. Probes and primers
 CC derived from APP nucleic acid sequences are useful for detecting Hu-Asp
 CC nucleic acids in vitro assays and in Northern and Southern blots. The
 CC present sequence represents the coding sequence of T7-human Asp-2a delta
 CC TM construct which has a T7 tag and lacks the transmembrane domain. This
 CC construct was used for bacterial expression and purification of human
 CC Asp2a. (Updated on 11-SEP-2003 to standardise OS field)
 XX
 SQ Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAS11711 ..
 Alignment segment 1/1: (+)
 Matching length: 104.00 EScore: 35.9
 Matching Percent Similarity: 100.00 Total length: 20
 Total Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Identity: 100.00
 Gaps: 0
 Alignment:
 22 ThrGlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 43 ACCGAGCAGCGGATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 92
 38 oLeuGlyLeu 41
 93 CTGGGGGCTG 102
 Sequence name: rmgp2ndb:AA017874
 Sequence documentation:
 ID AAD17874 standard; cDNA; 1341 BP.
 XX
 AC AAD17874;
 XX
 DT 10-DEC-2001 (first entry)
 XX
 XX T7-Human-pro-Asp 2(a) protein lacking TM domain encoding cDNA.
 XX
 KM Human; aspartyl protease 1; Asp1, amyloid precursor protein; APP;

KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
 KM amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;
 KM T7-Human-pro-Asp 2(a) protein; ss.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT CDS 1..1341
 FT /*tag= a
 FT /product= "T7-Human-pro-Asp 2(a) protein lacking
 FT transmembrane domain"
 XX
 XX GB2357767-A.
 XX
 XX 04-JUL-2001.
 XX
 XX 22-SEP-2000; 2000GB-00023315.
 XX
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Bienkowski MJ, Gurney M,
 XX
 XX WPI; 2001-444208/48.
 DR P-PSDB; AAB10638.
 DR
 XX
 PT Polypeptide comprising fragments of human aspartyl protease with amyloid
 PT precursor protein processing activity and alpha-secretase activity, for
 PT identifying modulators useful in treating Alzheimer's disease.
 PS
 XX Example 9; Fig 6; 187pp; English.
 XX
 CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
 CC proteins which lack transmembrane domain or amino terminal domain or
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid
 CC protein precursor (APP) processing activity. The proteins of the
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
 CC are useful for treating Alzheimer's disease (AD) which causes progressive
 CC dementia with consequent formation of amyloid plaques, neurofibrillary
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
 CC for assaying hu-Asp1 proteolytic activity by contacting hu-Asp1 protein
 CC with the substrate under acidic conditions and determining the level of
 CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding T7-
 CC human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain. T7-human-
 CC pro-Asp 2(a) protein is generated from human Asp 2(a) protein by the
 CC addition of a T7 tag at its N-terminal end and the deletion of its C-
 CC terminal TM domain
 XX
 SQ Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD17874 ..
 Alignment segment 1/1: (+)
 Matching length: 104.00 EScore: 35.9
 Matching Percent Similarity: 100.00 Total length: 20
 Total Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Identity: 100.00
 Gaps: 0
 Alignment:
 22 ThrGlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 43 ACCGAGCAGCGGATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 92

38 OLeuGIyLeu
|||
93 CCGGGGCTG

41

102

Sequence name: rngp2ndb:AAD13030

Sequence documentation:

ID AAD13030 standard; cDNA; 1341 BP.

AC AAD13030;

DT 23-OCT-2001 (first entry)

DE T7-Human-pro-Asp2(a) deltatm protein cDNA.

KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KM neuroprotective; antisense therapy; gene therapy;
KM pro-Asp2(a) deltatm protein; ss.

OS Homo sapiens.
XX Synthetic.

XX Key Location/Qualifiers

FH CDS 1..1341

FT /*tag= a
/product= "T7-Human-pro-Asp2(a) deltatm protein"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

XX P-PSDB; AAE06868.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.

XX Example 9; Fig 6; 185pp; English.

CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present cDNA sequence encodes T7-Human-pro-aspartyl protease 2a
CC (Asp2a) deltatm protein which is obtained by the addition of T7 tag at

CC the N-terminal end and deletion of transmembrane domain at the C-terminal
CC end of Hu-Asp2a. Human Asp2a has beta-secretase activity
XX
XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13030 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	35.9
Matching	Percent	Similarity:	100.00	Matching	Percent
Total	Percent	Similarity:	100.00	Total	Percent
		Gaps:	0		Identity:
					100.00

Alignment:

22 ThrGINHISGIYIIExyLeuProLeuArgserGIyLeuGIyAlaPr 38
43 ACCGAGCAGGCAATCCGCTGCCCTCGGCGAGCGGCTGGGGGGCGCC 92
38 OLeuGIyLeu
|||
93 CCGGGGCTG

41
102

Sequence name: rngp2ndb:AAD06748

Sequence documentation:

ID AAD06748 standard; cDNA; 1341 BP.

XX AAD06748;

XX 10-AUG-2001 (first entry)

XX T7-Human-pro-Asp-2(a) delta TM protein cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;

XX Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;

XX beta-secretase; Asp-2a delta TM; ss.

XX Homo sapiens.

XX Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1341

FT /*tag= a
/product= "T7-Human-pro-Asp-2(a) delta TM protein"

XX WO200123533-A2.

XX 05-APR-2001.

XX 22-SEP-2000; 2000WO-US026080.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHNA) PHARMACIA & UPJOHN CO.

XX Gurney M, Bienkowski MJ;

XX WPI; 2001-290516/30.

XX P-PSDB; AAE02590.

PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.

XX Example 9; Fig 6; 189pp; English.

CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of

CC identifying those enzymes. The methods may be used to identify enzymes
 CC that may be used to cleave the alpha-secretase cleavage site of the APP
 CC protein. The enzymes may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is a cDNA encoding human T7
 CC aspartyl protease 2a (Asp 2a) deltaTM protein which is obtained by
 CC deleting the transmembrane domain and adding a T7 tag at the N-terminal
 CC end. This protein has beta-secretase protease activity

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06748 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCGAGCAGCGGCATCCGCTGCTGCGCAGCGGCTGGGGGGGCCCC 92
|||||
38 OLeuGlyLeu 41
|||||
93 CCGGGGGGCTG 102

```

Sequence name: rngp2ndb:AA511526

Sequence documentation:

ID AA511526 standard; cDNA; 1341 BP.

XX AA511526;

XX 24-OCT-2001 (first entry)

XX Human cDNA encoding the T7-Human-pro-Asp 2(a) delta TM fusion protein.

XX Human; Aspartyl protease; beta-secretase; neurotic; Asp2;

XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; T7-Human-pro-Asp 2(a) delta TM; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

XX CDS 1..1341

XX WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000798.

XX 09-MAY-2001; 2001WO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURNEY/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI, 2001-502549/55.

XX P-PSDB; AAU06612.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.

XX Example 9; Fig 6; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes T7-Human-pro-Asp 2(a) delta
 CC TM fusion protein which has a N-terminal T7 tag to aid purification when
 CC expressed in E. coli

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511526 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCGAGCAGCGGCATCCGCTGCTGCGCAGCGGCTGGGGGGGCCCC 92
|||||
38 OLeuGlyLeu 41
|||||
93 CCGGGGGGCTG 102

```

Sequence name: rngp2ndb:ABU52466

Sequence documentation:

ID ABL52466 standard; cDNA; 1341 BP.

XX ABL52466;

XX 16-JUL-2002 (first entry)

XX T7-human-pro-Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:21.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

XX amyloid precursor protein; APP; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..2094

XX /-tag= a

/product= "T7-human-pro-Asp-2(a)deltaTM"

GB2367060-A..

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PHMA) PHARMACIA & UPJOHN CO.

Bienkowski MJ, Gurney M,

WPI; 2002-397167/43.

P-PSDB; ABB78599.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 9; Fig 6; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see AB52456) where the nucleotide sequence encodes a polypeptide having Asp1 proteolytic activity and lacks nucleotides encoding a transmembrane domain; (3) a purified polynucleotide (III') comprising a sequence that hybridises under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see ABB78599)); (4) a vector (IV) comprising (III) or (III') and (5) a host cell (V) transformed or transfected with (III), (III') and/or (IV). The hu-Asp1 protease substrate (I) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence encodes human T7-human-pro-Asp-2(a)deltaTM, which is given in an example from the present invention

Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AB52466 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

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22  ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
    |||||
43  ACCGACGACGCGCATCCGCTCCCTGGCGACGCGCCCTGGGGGCGGCC 92
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38  OLeuGlyLeu
    |||||
93  CCTGGGGCGCTG
    |||||
    102
  
```

Sequence name: rngp2ndb:ADJ94333

Sequence documentation:
ID ADJ94333 standard; cDNA; 1341 BP.

AC ADJ94333;

XX 03-JUN-2004 (first entry)

XX Human cDNA encoding T7-human-pro-Asp-2(a)deltaTM.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta; mutant.

XX Homo sapiens.

OS Synthetic.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SRP-1998; 98US-0101594P.

XX 23-SRP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

PA (PHMA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-236722/22.

DR P-PSDB; ADJ94334.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

PT useful for treating or preventing Alzheimer's disease involves comparing

PT APP processing activity of protease in presence and absence of test

PT agent.

XX Example 9; SEQ ID NO 21; 109pp; English.

PS The invention relates to identifying agents that modulate activity of

XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

XX precursor protein (APP) in the presence and absence of a test agent,

XX where Asp2 is a recombinant polypeptide and processes APP into amyloid

XX beta, determining APP processing activity of Asp2 in presence and absence

XX of the test agent, and comparing the activities to identify agents that

XX modulate the activity of Asp2. Also disclosed are the cDNA and proteins

XX for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the

XX nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising

XX the vector and the method of producing Hu-Asp polypeptide, an isolated

XX antibody that specifically binds to Hu-Asp polypeptides, identifying a

XX cell that can be used to screen for inhibitors of beta secretase

XX activity, novel isoforms of amyloid protein precursor (APP), where the

XX last 2 carboxy terminus amino acids of that isoform are both lysine

XX residues (e.g. those designated APP695-KK or carrying the Swedish

XX mutation where KM at 595-596 is mutated to NV, designated e.g. APP695-Sw

XX or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful

XX for assaying for beta secretase activity and screening for inhibitors of

XX beta-secretase) and polynucleotides that encode the APP proteins. The

XX method is useful for identifying agents that modulate the activity

XX (amyloid precursor protein processing activity) of Asp2 aspartyl

XX protease. Preferably, the method is useful for identifying agents that

XX inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid

XX precursor protein processing, are useful for treating or preventing

XX Alzheimer's disease. The present sequence encodes an aspartyl protease

XX mutant construct (e.g. lacking a transmembrane domain and/or including a

XX caspase cleavage site) used to investigate the cleavage activity of Asp2

CC proteins.

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94333 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaBr 38
|||||
43 ACCGACGACGGGATCCGGCTGCGCGACGGGCTGGGGGGGCCCC 92
38 cLeuGlyLeu
|||||
93 CCGGGGGCTG 102
```

Sequence name: rngp2ndb:AD050429

Sequence documentation:
ID AD050429 standard; DNA; 1341 BP.

AC AD050429;

XX 29-JUL-2004 (first entry)

DE T7-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; gene; ds.

XX Homo sapiens.

OS Synthetic.

Key Location/Qualifiers
FT CDS 1..1341
FT /*tag= a
FT /product= "T7-Human-pro-Asp-2(a)deltaTM protein"

PN US6737510-B1.

XX 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PA Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2004-387112/36.

DR P-PSDB; AD050430.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
XX involved in processing amyloid precursor protein into amyloid beta,
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease.

XX Example 9; SEQ ID NO 21; 108bp; English.

XX The invention relates to a method for identifying an agent that decreases

CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is T7-
CC Human-pro-Asp-2(a)deltaTM DNA. This sequence is used to illustrate the
CC method of the invention.

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050429 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaBr 38
|||||
43 ACCGACGACGGGATCCGGCTGCGCGACGGGCTGGGGGGGCCCC 92
38 cLeuGlyLeu
|||||
93 CCGGGGGCTG 102
```

Sequence name: rngp2ndb:ADR75342

Sequence documentation:
ID ADR75342 standard; DNA; 1341 BP.

AC ADR75342;

DT 18-NOV-2004 (first entry)

DE T7-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; human; gene; ds.

XX Homo sapiens.

OS Synthetic.

Key Location/Qualifiers
FT CDS 1..1341
FT /*tag= a
FT /product= "T7-Human-pro-Asp-2(a)deltaTM protein"

PN US2004166507-A1.

XX 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

PA (BIEN/) BIENKOWSKI M J.

PA (HEIN/) HEINRICHSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2004-624916/60.

DR P-PSDB; ADR75343.

XX Novel purified/isolated polynucleotide encoding polypeptide having
 PT aspartyl protease activity involved in processing amyloid precursor
 PT protein into amyloid beta, useful in identifying agent decreasing
 PT activity of aspartyl protease.

XX Example 9; SEQ ID NO 21; 107pp; English.

CC The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (Asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that
 CC decreases the protease activity of the Asp. Asp DNA is useful in
 CC chromosome identification as they can hybridize with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
 CC present sequence is the T7-Human-pro-Asp-2(a)deltaTM DNA. This sequence
 CC is used to illustrate the method of the invention.

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75342 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
43 ACCCAGCAGCGCATCCGCTGCCCTGCGCAGCGCCTGGGGGGCGCC 92
38 OleuGlyLeu
41
93 CCTGGGGCTG
102

```

Sequence name: rnp2ndb:AAA15688

Sequence documentation:

ID AAA15688 standard; cDNA; 1362 BP.

XX AAA15688;

DT 03-AUG-2000 (first entry)

DE Modified human aspartyl protease 2 (Asp2) nucleotide sequence.

KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
 KM Alzheimer's disease; beta secretase site; ss.

XX Homo sapiens.

OS MO200017369-A2.

PN 30-MAR-2000.

PF 23-SEP-1999; 99MO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHMA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

PI WPI; 2000-303209/26.

DR P-PSDB; AAY8438.

XX New enzyme designated human aspartase useful in research into Alzheimer's
 PT Disease is capable of cleaving amyloid protein precursor at the beta
 PT secretase site to produce amyloid beta peptide.

XX Example 10; Page 168-169; 183pp; English.

CC This sequence represents a modified human aspartyl protease 2 (Asp2)
 CC nucleotide sequence. Asp2 encoded by this sequence has the C-terminal
 CC transmembrane domain deleted. The invention relates to a protease (e.g.
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
 CC protein (APP). The protease contains a sequence encoding the amino acid
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
 CC amino acids. When mutated the APP gene causes an autosomal dominant form
 CC of Alzheimer's disease. APP localises to the cell surface membrane and
 CC have a single C-terminal transmembrane domain. Proteolytic processing of
 CC APP produces the amyloid beta protein, which is physiologically very important
 CC in Alzheimer's disease. The invention includes a nucleotide sequence
 CC encoding the protease, a vector containing the nucleotide sequence, and a
 CC cell line comprising the vector. Methods for screening for inhibitors of
 CC beta secretase activity are also given in the invention. The human
 CC aspartase protein and nucleotide sequences and the methods for
 CC identifying inhibitors of the protease, are useful in the treatment of
 CC and research in to Alzheimer's disease

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15688 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGCTGCCCTGCGCAGCGCCTGGGGGGCGCC 113
38 OleuGlyLeu
41
114 CTTGGGGCTG
123

```

Sequence name: rnp2ndb:AA511715

Sequence documentation:

ID AA511715 standard; DNA; 1362 BP.

XX AA511715;

DT 09-SEP-2004 (revised)

DT 24-OCT-2001 (first entry)

DE DNA encoding human aspartyl protease 2a deltaTM (HuAsp-2adeltaTM).

KW Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;

KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;
 KM beta-secretase; Alzheimer's disease; ds; HuAsp-2adeltaTM.

XX Homo sapiens.

OS Unidentified.

XX Key Location/Qualifiers

FT CDS 1..1362

FT /product= "Human Aspartyl protease-2a delta TM"
 FT sig_peptide 1..63
 FT /*tag= a

FT mat_peptide 172..1360
PT /*tag= C
PT /note= "Mature human aspartyl protease 2a deltatm"
XX
XX MO200149097-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-1B000797.
XX
XX 09-MAY-2001; 2001WO-1B000797.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARODI/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX P-PSDB; AAU07215.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Disclosure; Page 160; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC and for reducing cellular production of amyloid beta (Abeta) from APP.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease, and for identifying modulators of amyloid-beta
CC (Abeta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from APP nucleic acid sequences are useful for detecting Hu-APP
CC nucleic acids in in vitro assays and in Northern and Southern blots. The
CC present sequence represents the coding sequence of human Asp-2a delta TM
CC construct which lacks the transmembrane domain. This construct was used
CC for bacterial expression and purification of human Asp2a
CC
CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
XX
XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAS11715 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching length: 104.00 Score: 35.9
XX Matching Percent: 100.00 Total length: 20
XX Total Similarity: 100.00 Matching Percent Identity: 100.00
XX Total Percent Similarity: 100.00 Total Percent Identity: 100.00
XX Gaps: 0
XX
XX Alignment:
XX 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
XX |||||
XX 64 ACCGACGACGCGATCCGGCTGCCCTGGCGACGCGCTGGGGGGGCCCC 113

38 oLeuGlyLeu 41
114 CCGGCGCTG 123
Sequence name: rngp2ndb:AA017878
Sequence documentation:
ID AAD17878 standard; cDNA; 1362 BP.
XX
XX AAD17878;
XX
XX 10-DEC-2001 (first entry)
XX
XX Human-Asp 2(a) protein lacking transmembrane domain encoding cDNA.
XX
XX Human; aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective;
XX se.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1362
XX /tag= a
XX /product= "Human-Asp 2(a) protein lacking transmembrane
XX domain"
XX /trnal_except= (pos:640..642, aa:Gln)
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99MO-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX PR 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Blenkowski MJ, Gurney M;
XX WPI; 2001-444208/48.
XX P-PSDB; AAB10642.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 10; Page 130; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
CC human Asp 2(a) protein lacking a transmembrane (TM) domain which is
CC generated by the deletion of the C-terminal TM domain of human Asp 2(a)
XX protein
XX
XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17878 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThcGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCAGCAGCAGCGCATCCGGCTGCCCTCGCAGCGCGCTGGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CTTGGGGCTG
123

```

Sequence name: rnp2ndb: AAD13034

Sequence documentation:

ID AAD13034 standard; cDNA, 1362 BP.

AC AAD13034;

DT 23-OCT-2001 (first entry)

DE Human-Asp2(a) deltaTM protein cDNA.

Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP; beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis; neurofibrillary tangle; neuronal loss; amyloid-beta peptide; noctropic; neuroprotective; antisense therapy; Asp2(a) deltaTM protein; gene therapy; ss.

OS Homo sapiens.

OS Synthetic.

Key Location/Qualifiers
CDS 1..1362
/*tag= a
/product= "Human Asp2(a) deltaTM protein"
/transl_except= (pos:640..642, aa:Gln)

MO200150829-A2.

19-JUL-2001.

09-MAY-2001; 2001MO-IB000799.

09-MAY-2001; 2001MO-IB000799.

09-MAY-2001; 2001MO-IB000799.

(BIEN/) BIENKOWSKI M J.

(GURN/) GURNEY M E.

(HEIN/) HEINRIKSON R L.

(PARO/) PARODI L A.

(YANK/) YAN R.

BIENKOWSKI MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

WPI; 2001-483072/52.

P-PDB; AAE06872.

Novel purified polypeptide comprising fragment of mammalian aspartyl protease 2, lacking Asp2 transmembrane domain and retaining beta secretase activity of Asp2 useful for identifying inhibitors of Asp2 activity.

Example 10; Page 160; 185pp; English.

CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid precursor protein (APP) isoforms and their corresponding DNA molecules. CC Human aspartyl proteases can act as beta-secretase proteases useful for treating Alzheimer's disease. APP isoforms are useful for identifying CC modulators of amyloid-beta peptide production, for use in designing CC therapeutics for the treatment and prevention of Alzheimer's disease, CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. APP isoforms are also used in methods for identifying CC inhibitors and modulators of human Asp2 activity. The invention relates to a method for identifying agents that modulate the activity of human CC aspartyl protease Asp2. Amyloid-beta peptide obtained from APP are used CC as a means to screen in cellular assays for the inhibitors of beta- and CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in CC polymerase chain reactions (PCR). The probes are useful for detecting Hu- CC Asp nucleic acids in in vitro assays and in Northern and Southern blots. CC The present cDNA sequence encodes Human aspartyl protease 2a (Hu-Asp2a). CC deltaTM protein which is obtained by the deletion of transmembrane domain CC at the C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase CC activity

Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13034 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThcGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCAGCAGCAGCGCATCCGGCTGCCCTCGCAGCGCGCTGGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CTTGGGGCTG
123

```

Sequence name: rnp2ndb: AAD06752

Sequence documentation:

ID AAD06752 standard; cDNA, 1362 BP.

AC AAD06752;

DT 10-AUG-2001 (first entry)

DE Human-Asp-2(a) delta TM protein cDNA.

Human; alpha-secretase; amyloid precursor protein; APP; therapy; Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a; beta-secretase; Asp-2a delta TM; mutant; ss.

OS Homo sapiens.

OS Synthetic.

Key Location/Qualifiers
CDS 1..1362
/*tag= a
/product= "Human-Asp-2(a) delta TM protein"
/transl_except= (pos:640..642, aa:Gln)

MO200123533-A2.

05-APR-2001.

22-SEP-2000; 2000MO-US026080.

23-SEP-1999; 99US-015493P.

PR 23-SEP-1999; 99MO-US020881.
 PR 13-OCT-1999; 99US-00415901.
 PR 06-DEC-1999; 99US-0169232P.
 XX
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney M, Bienkowski MJ;
 XX
 XX WPI, 2001-290516/30.
 DR P-PSDB; AA025594.
 XX
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
 protein, useful for the treatment of Alzheimer's disease.
 XX
 PS Example 10; Page 158-159, 189pp; English.
 XX
 XX The present invention relates to enzymes for cleaving the alpha-
 secretase site of the amyloid precursor protein (APP) and methods of
 identifying those enzymes. The methods may be used to identify enzymes
 CC that may be used to cleave the alpha-secretase cleavage site of the APP
 CC protein. The enzymes may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is a cDNA encoding human
 CC Aspartyl protease 2a (Asp-2a) deltaTM protein which is obtained by
 CC deleting its transmembrane domain. This sequence has beta-secretase
 CC protease activity
 XX
 SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD06752 ..
 Alignment segment 1/1: (+)
 Matching length: 104.00 Total length: 35.9
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0
 Alignment:
 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCGACGACGGCATCCGGCTGCGGAGCGGCTGGGGGGGGCCCC 113
 38 OLeuGlyLeu 41
 114 CCGGGGGGGCTG 123
 Sequence name: rmgp2ndb:AA511530
 Sequence documentation:
 ID AA511530 standard; cDNA; 1362 BP.
 XX
 XX AA511530;
 DT 24-OCT-2001 (first entry)
 XX
 XX Human cDNA encoding Human-pro-Asp 2(a) delta TM.
 DE
 XX
 KM Human: Aspartyl protease; beta-secretase; neurotropic; ASP2;
 KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KM amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM; ser mutant.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key location/Qualifiers
 FT CDS 1..1362
 FT /*tag= a
 FT /product= "Human-pro-Asp 2(a) delta TM"
 FT /transl_except= (pos:639..642,aa:Gln)
 FT sig_peptide 1..63
 FT /*tag= b

FT mat_peptide 64..1359
 FT /*tag= C
 FT /label= Mature_Human_pro-Asp_2(a)_delta_TM
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 XX
 PN MO200149098-A2.
 XX
 PD 12-JUL-2001.
 XX
 XX 09-MAY-2001; 2001MO-IB000798.
 PF
 PR 09-MAY-2001; 2001MO-IB000798.
 XX
 XX (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX
 XX WPI, 2001-502549/55.
 DR P-PSDB; AAU06616.
 XX
 DR Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 XX Example 10; Page 160; 185pp; English.
 PS
 XX
 XX The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes Human-pro- Asp 2(a) delta TM
 CC protein, which lacks the C-terminal transmembrane domain
 XX
 SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AA511530 ..
 Alignment segment 1/1: (+)
 Matching length: 104.00 Total length: 35.9
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0
 Alignment:
 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCGACGACGGCATCCGGCTGCGGAGCGGCTGGGGGGGGCCCC 113

38 OLeuGlyLeu
 |||||
 114 CCGGGGGCTG

41
 123

Sequence name: rngp2ndb:ABL52470

Sequence documentation:

ID ABL52470 standard; cDNA; 1362 BP.

AC ABL52470;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:29.

KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
 XX chromosome 11q23.3-24.1; gene; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1362

FT /tag= "a

FT /product= "Human Asp-2(a)delta TM"

FT /transl_except= (pos:640..642,aa:Gln)

GB2367060-A.

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PHNA) PHARMACIA & UPJOHN CO.

Blenkowski MJ, Gurney M;

WPI; 2002-397167/43.

P-PSDB; ABB78603.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl

protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 10; Page 130; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1)

substrate (I) which comprises a peptide of no more than 50 amino acids,

and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-

Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1

proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with

(i) under acidic conditions; and (b) determining the level of hu-Asp1

proteolytic activity; (2) a purified polynucleotide (III) comprising a

nucleotide sequence that hybridizes under stringent conditions to the non

-coding strand complementary to a defined 1804 nucleotide sequence (see

ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1

proteolytic activity and lacks nucleotides encoding a transmembrane

domain; (3) a purified polynucleotide (III') comprising a sequence that

hybridizes under stringent conditions to (III) (the nucleotide sequence

encodes a polypeptide further lacking a pro-peptide domain corresponding

to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)

comprising (III) or (III') and (5) a host cell (V) transformed or

transfected with (III), (III'), and/or (IV). The hu-Asp1 protease

substrate (I) may be used as an enzyme substrate in assays to detect

aspartyl protease activity, (II) and therefore diagnose diseases

associated with aberrant hu-Asp1 expression and activity such as

Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while

hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present

CC sequence encodes human Asp-2(a)deltaTM, which is given in an example from

CC the present invention

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52470 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching	Percent	100.00	Total Length:	20
Total	Percent	100.00	Matching	Percent
Similarity:	100.00	Total	Percent	Identity:
Gaps:	0	Identity:	100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38
 64 ACCGACGACGGGATCCGCGTCCCTCGCGACGGGCGGCGCC 113
 38 OLeuGlyLeu
 114 CCGGGGGCTG 123

Sequence name: rngp2ndb:ADJ94341

Sequence documentation:

ID ADJ94341 standard; cDNA; 1362 BP.

AC ADJ94341;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(a)deltaTM cDNA.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta; mutant.

OS Homo sapiens.

OS Synthetic.

PN US6706485-B1.

PD 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHNA) PHARMACIA & UPJOHN CO.

Gurney ME, Blenkowski MJ, Heinriksen RL, Parodi LA, Yan R;

WPI; 2004-236722/22.

P-PSDB; ADJ94342.

Identifying agents that modulate activity of Asp2 aspartyl protease

PT useful for treating or preventing Alzheimer's disease involves comparing

PT APP processing activity of protease in presence and absence of test

PT agent.

PS Example 10; SEQ ID NO 29; 109pp; English.

The invention relates to identifying agents that modulate activity of

CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

CC precursor protein (APP) in the presence and absence of a test agent,

CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence
CC of the test agent, and comparing the activities to identify agents that
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
CC the vector and the method of producing Hu-Asp polypeptide, an isolated
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
CC cell that can be used to screen for inhibitors of beta secretase
CC activity, novel isoforms of amyloid protein precursor (APP), where the
CC last 2 carboxy terminal amino acids of that isoform are both lysine
CC residues (e.g. those designated APP695-KK or carrying the Swedish
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
CC for assaying for beta secretase activity and screening for inhibitors of
CC beta-secretase) and polynucleotides that encode the APP protein. The
CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing, are useful for treating or preventing
CC Alzheimer's disease. The present sequence encodes an aspartyl protease
CC mutant construct (e.g. lacking a transmembrane domain and/or including a
CC caspase cleavage site) used to investigate the cleavage activity of Asp2
CC proteins.

CC SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94341 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sgIY11eArgLeuProLeuAArgSerG1YLeuG1YAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 OleuG1YLeu
|||||
114 CCTGGGGGCTGG 123
```

Sequence name: rnp2ndb:AD050437

Sequence documentation:

ID AD050437 standard; DNA; 1362 BP.

XX ADO50437;

XX 29-JUL-2004 (first entry)

XX Human Asp-2(a)deltaTM mutant DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; gene; mutant; ds.

XX Homo sapiens.

OS Synthetic.

XX Key

FT CDS

Location/Qualifiers
1. 1362
/*tag= a
/product= "Human Asp-2(a)deltaTM mutant protein"

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-015493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX (PHMA) PHARMACIA & UPJOHN CO.
XX Guiney ME, Bienkowski MJ, Heintzkeon RL, Parodi LA, Yan R;
XX WPI: 2004-387112/36.
XX P-PSDB; AD050438.
XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
XX involved in processing amyloid precursor protein into amyloid beta,
XX PT useful in preparing a composition for treating or preventing Alzheimer's
XX disease.
XX Example 10; SEQ ID NO 29, 108pp; English.
XX PS
XX CC The invention relates to a method for identifying an agent that decreases
XX CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX CC provides enzyme and enzymatic procedures for cleaving the beta secretase
XX CC cleavage site of the amyloid precursor protein (APP). The invention is
XX CC useful in preparing a composition for treating or preventing Alzheimer's
XX CC disease. It is also useful in gene therapy. The present sequence is human
XX CC Asp-2(a)deltaTM mutant DNA. This sequence is used to illustrate the
XX CC method of the invention.

SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050437 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sgIY11eArgLeuProLeuAArgSerG1YLeuG1YAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 OleuG1YLeu
|||||
114 CCTGGGGGCTGG 123
```

Sequence name: rnp2ndb:ADR75350

Sequence documentation:

ID ADR75350 standard; DNA; 1362 BP.

XX ADR75350;

XX 18-NOV-2004 (first entry)

XX Human Asp-2(a)deltaTM mutant DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KM chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

XX Homo sapiens.

OS Synthetic.

XX Key

FT CDS

Location/Qualifiers
1. 1362

```
FT      /tag= a
FT      /product= "Human Asp-2(a)deltaTM mutant protein"
FT      /transl_except= (pos:640..642, aa:Gln)
XX      US2004166507-A1.
XX      26-AUG-2004.
XX      29-AUG-2003; 2003US-00652045.
XX      24-SEP-1998; 98US-0101594P.
XX      23-SEP-1999; 99US-00404133.
XX      23-SEP-1999; 99US-0155493P.
XX      13-OCT-1999; 99US-00416901.
XX      (GURN/) GURNEY M. E.
XX      (BIEN/) BIENKOWAKI M. J.
XX      (HEIN/) HEINRIKSON R. L.
XX      (PARO/) PARODI L. A.
XX      (YANR/) YAN R.
XX      Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;
XX      WPI; 2004-624916/60.
XX      P-PSDB; ADR75351.
XX      Novel purified/isolated polynucleotide encoding polypeptide having
XX      aspartyl protease activity involved in processing amyloid precursor
XX      protein into amyloid beta, useful in identifying agent decreasing
XX      activity of aspartyl protease.
XX      Example 10; SEQ ID NO 29; 107pp; English.
XX      The invention relates to nucleic acid sequences encoding aspartyl
XX      protease (Asp) polypeptides having aspartyl protease activity involved in
XX      processing amyloid precursor protein (APP) into amyloid beta. The
XX      invention also relates to a method for identifying an agent that
XX      decreases the protease activity of the Asp. Asp DNA is useful in
XX      chromosome identification as they can hybridize with a specific location
XX      on a human chromosome and in identifying the relationship between genes
XX      and diseases (particular gene responsible for causing diseases). It is
XX      also useful for identifying candidates to modulate the progression of
XX      Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX      in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX      present sequence is the human Asp-2(a)deltaTM mutant DNA. This sequence
XX      is used to illustrate the method of the invention.
XX      Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
XX      Alignment of: us-10-726-967a-1 x ADR75350 ..
XX      Alignment segment 1/1: (+)
XX      Matching length: 104.00      Total length: 35.9
XX      Matching Percent Similarity: 100.00      Matching Percent Identity: 20
XX      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
XX      Gaps: 0
XX      Alignment:
XX      22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIleP 38
XX      64 ACCGACGACGGGATCCGGCTGCGCAGCGGCGTGGGGGGGCCCC 113
XX      38 OLeuGlyLeu 41
XX      114 CTTGGGGCTG 123
XX      Sequence name: rngp2ndb:ADC81562
XX      Sequence documentation:
XX      ID ADC81562 standard; DNA; 1365 BP.
```

```
XX      AC ADC81562;
XX      DT 01-JAN-2004 (first entry)
XX      DE Recombinant BACE encoding DNA from pET11a-P33K-BACE SEQ ID NO:8.
XX      KW human; BACE; modification; Pro33lys; pro-enzyme; gene; ds.
XX      OS Synthetic.
XX      OS Homo sapiens.
XX      FH Key
XX      FT CDS
XX      FT 1..1365 location/Qualifiers
XX      FT /tag= b
XX      FT /product= "recombinant BACE P33K"
XX      FT sig_peptide 1..69
XX      FT mat_peptide 70..1365
XX      FT /tag= a
XX      FT /tag= c
XX      FT /product= "mature recombinant P33K BACE ({seqid:2})"
XX      PN MO2003072733-A2.
XX      PD 04-SEP-2003.
XX      PF 21-FEB-2003; 2003WO-US005508.
XX      PR 21-FEB-2002; 2002US-0358651P.
XX      PA (PHAA ) PHARMACIA & UPJOHN CO.
XX      PI Chou K, Howe JW;
XX      DR WPI; 2003-712719/67.
XX      DR P-PSDB; ADC81563, ADC81561.
XX      PT BACE polypeptides having Pro33lys modification, useful in determining
XX      PT possible mutations, which will inhibit enzyme activity, and in
XX      PT determining potential active site for target molecules.
XX      PS Claim 13; Fig 4A-B; 38pp; English.
XX      CC The present invention describes an isolated polypeptide (I) comprising or
XX      CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),
XX      CC and comprising human BACE having the modification pro33lys. Also
XX      CC described: (1) a composition comprising an active human BACE enzyme
XX      CC comprising the pro-enzyme sequence of BACE having the modification
XX      CC pro33lys; (2) an isolated polynucleotide comprising a sequence encoding
XX      CC (1); (3) an isolated polynucleotide comprising or comprising of
XX      CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an
XX      CC expression vector comprising the polynucleotide of (2), or a
XX      CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
XX      CC expression vector can produce the Pro33lys-BACE polypeptide when present
XX      CC in a compatible host cell, when cultured under conditions that allow
XX      CC production; (5) a recombinant host cell comprising the expression vector;
XX      CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
XX      CC polypeptide having Pro33lys modification may be used in determining
XX      CC possible mutations, which will inhibit enzyme activity, and in
XX      CC determining potential active site for target molecules. The vector
XX      CC comprising the BACE polynucleotide is useful for producing recombinant
XX      CC BACE polypeptides having Pro33lys modification. The present sequence
XX      CC encodes recombinant BACE expressed from a pET11a-P33K-BACE construct,
XX      CC from the present invention.
XX      SQ Sequence 1365 BP; 296 A; 382 C; 394 G; 293 T; 0 U; 0 Other;
XX      Alignment of: us-10-726-967a-1 x ADC81562 ..
XX      Alignment segment 1/1: (+)
XX      Matching length: 104.00      Total length: 35.9
XX      Matching Percent Similarity: 100.00      Total Percent Identity: 20
```

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrglnHtSGYtLeArgLeuProleuArgSerGlyLeuGlyAlaPr 38
70 ACCCAACATGGATTGATCTGCGCCTGGCGGTGGGGTGGCTCC 119
38 OLeuGlyLeu 41
120 ACTGGGCTCTG 129
```

Sequence name: rngp2nhd:ADJ57780

Sequence documentation:
ID ADJ57780 standard; DNA; 1365 BP.

AC ADJ57780;
XX
DT 06-MAY-2004 (first entry)
XX
DE DNA sequence for BACE WT R57DEL.
XX
KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX Alzheimer's disease; ds.
XX Synthetic.
XX OS
XX FH Key Location/Qualifiers
XX CDS 1..1365
FT /*tag= a
FT /product= "BACE protein"
XX
XX PN MO2004011641-A2.
XX PD 05-FEB-2004.
XX PF 25-JUL-2003; 2003MO-GB003200.
XX PR 26-JUL-2002; 2002US-0398681P.
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.
XX PI Vuillard LMN, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX P-PSDB; ADJ57781.
XX WPI; 2004-169242/16.
XX DR
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX PT syndrome.
XX PS Disclosure; SEQ ID NO 9; 145pp; English.
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)
XX CC protein. The compound or the composition is useful in medicine and the
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,
XX CC compounds, pharmaceutical compositions, medicament, drug or other
XX CC composition comprising the compound is useful for treating or preventing
XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
XX CC present sequence represents the DNA sequence for a BACE encoding
XX CC sequence.
XX SQ Sequence 1365 BP; 292 A; 392 C; 398 G; 283 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ57780 ..

Alignment segment 1/1: (+)

Quality: 104.00
Matching Length: 20Score: 35.9
Total Length: 20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrglnHtSGYtLeArgLeuProleuArgSerGlyLeuGlyAlaPr 38
70 ACCCAACATGGATTGATCTGCGCCTGGCGGTGGGGTGGCTCC 119
38 OLeuGlyLeu 41
120 CCTGGGCTCTG 129
```

Sequence name: rngp2nhd:ADJ57772

Sequence documentation:
ID ADJ57772 standard; DNA; 1368 BP.

AC ADJ57772;
XX
DT 06-MAY-2004 (first entry)
XX
DE DNA sequence for BACE WT.
XX
KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX Alzheimer's disease; ds.
XX Synthetic.
XX OS
XX FH Key Location/Qualifiers
XX CDS 1..1368
FT /*tag= a
FT /product= "BACE protein"
XX
XX PN MO2004011641-A2.
XX PD 05-FEB-2004.
XX PF 25-JUL-2003; 2003MO-GB003200.
XX PR 26-JUL-2002; 2002US-0398681P.
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.
XX PI Vuillard LMN, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX P-PSDB; ADJ57773.
XX WPI; 2004-169242/16.
XX DR
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX PT syndrome.
XX PS Disclosure; SEQ ID NO 1; 145pp; English.
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)
XX CC protein. The compound or the composition is useful in medicine and the
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,
XX CC compounds, pharmaceutical compositions, medicament, drug or other
XX CC composition comprising the compound is useful for treating or preventing
XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
XX CC present sequence represents the DNA sequence for a BACE encoding
XX CC sequence.
XX SQ Sequence 1368 BP; 292 A; 393 C; 400 G; 283 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ57772 ..

Alignment segment 1/1: (+)

Quality: 104.00
Matching Length: 20Score: 35.9
Total Length: 20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
70 ACCCAGCAGCAGCATCCGGCTGCCCTGCCAGCAGCGCTGGGGGGCGCCCC 119
38 OLeuGlyLeu 41
120 CCTGGGGGCTG 129
```

Sequence name: rmgp2ndb:ADJ57776

Sequence documentation:

ID ADJ57776 standard; DNA; 1368 BP.

AC ADJ57776;

DT 06-MAY-2004 (first entry)

DE DNA sequence for BACE WT_R56K57K.

KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KM Alzheimer's disease; ds.

OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1368

FT /*tag= a

FT /product= "BACE protein"

PN MO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003MO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

XX (ASTE-) ASTEX TECHNOLOGY LTD.

XX Vuillard LMV, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI; 2004-159242/16.

P-PSDB; ADJ57777.

XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX syndrome.

PS Disclosure; SEQ ID NO 5; 145bp; English.

CC The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compound, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE encoding
CC sequence.

SQ Sequence 1368 BP; 295 A; 392 C; 398 G; 283 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ57776 ..

Alignment segment 1/1: (+)

Quality: 104.00
Matching length: 20Score: 35.9
Total length: 20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
70 ACCCAGCAGCAGCATCCGGCTGCCCTGCCAGCAGCGCTGGGGGGCGCCCC 119
38 OLeuGlyLeu 41
120 CCTGGGGGCTG 129
```

Sequence name: rmgp2ndb:ACC84850

Sequence documentation:

ID ACC84850 standard; DNA; 1371 BP.

AC ACC84850;

DT 12-SEP-2003 (first entry)

DE Human promemapsin 2-T1 protein encoding DNA.

KW Memapsin 1; nootropic; neuroprotective; memapsin 2; beta secretase;
KM beta-amyloid protein; Alzheimer's disease; promemapsin 2-T1; human; gene;
KM ds.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1371

FT /*tag= a

FT /product= "promemapsin 2-T1"

PN MO2003039454-A2.

PD 15-MAY-2003.

PF 23-OCT-2002; 2002MO-US034324.

PR 23-OCT-2001; 2001US-0335952P.

PR 27-NOV-2001; 2001US-0333545P.

PR 14-JAN-2002; 2002US-0348464P.

PR 14-JAN-2002; 2002US-0348615P.

PR 20-JUN-2002; 2002US-0390804P.

PR 19-JUL-2002; 2002US-0397557P.
PR 19-JUL-2002; 2002US-0397619P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PA (UNIT) UNIV ILLINOIS FOUNDD.

XX Ghosh AK, Tang J, Balcer G, Chang W, Hong L, Koelsch G, Loy J;

PI Turner RT;

XX WPI; 2003-541410/51.

DR P-PSDB; ABR61929.

XX New peptide compounds are memapsin beta secretase inhibitors used for
PT treating Alzheimer's disease.
XX Example; Fig 10; 407bp; English.

SQ Sequence 1371 BP; 292 A; 395 C; 400 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ACC84850 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching Length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

22	ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr	38
70	ACCCAGCAGCGGCAATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCC	119
38	OLEuGlyLeu	41
120	CCTGGGGCTG	129

Sequence name: rngp2ndb:AAA15689

Sequence documentation:

ID AAA15689 standard; cDNA, 1380 BP.

AC AAA15689;

DT 03-AUG-2000 (first entry)

DE Modified human aspartyl protease 2 (Asp2) nucleotide sequence.

KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; Alzheimer's disease; beta secretase site; ss.

OS Homo sapiens.

PN WO200017369-A2.

XX 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2000-303209/26.

DR P-PSDB; AAY88439.

New enzyme designated human aspartase useful in research into Alzheimer's Disease is capable of cleaving amyloid protein precursor at the beta secretase site to produce amyloid beta peptide.

Example 10; Page 172-173; 183pp; English.

This sequence represents a modified human aspartyl protease 2 (Asp2) nucleotide sequence. Asp2 encoded by this sequence has the C-terminal transmembrane domain deleted. The invention relates to a protease (e.g. Asp2) capable of cleaving the beta secretase site of amyloid precursor protein (APP). The protease contains a sequence encoding the amino acid sequence DTG and a sequence encoding BSG or DTG separated by 100-300 amino acids. When mutated the APP gene causes an autosomal dominant form of Alzheimer's disease. APP localises to the cell surface membrane and have a single C-terminal transmembrane domain. Proteolytic processing of APP produces the amyloid beta protein, which is possibly very important in Alzheimer's disease. The invention includes a nucleotide sequence encoding the protease, a vector containing the nucleotide sequence, and a cell line comprising the vector. Methods for screening for inhibitors of aspartase protein and nucleotide sequences and the methods for identifying inhibitors of the protease, are useful in the treatment of and research in to Alzheimer's disease

XX SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15689 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching Length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

22	ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr	38
64	ACCCAGCAGCGGCAATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCC	113
38	OLEuGlyLeu	41
114	CCTGGGGCTG	123

Sequence name: rngp2ndb:AAA15669

Sequence documentation:

ID AAA15669 standard; DNA, 1380 BP.

AC AAA15669;

DT 15-SEP-2003 (revised)

DT 06-AUG-2003 (revised)

DT 03-AUG-2000 (first entry)

DE T7-caspase-human-pro-Asp-2(a)-deltaTM nucleotide sequence.

KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; ss; Alzheimer's disease; beta secretase site;

KM T7-caspase-human-pro-Asp-2(a)-deltaTM.

OS Homo sapiens;

OS Enterobacteria phage T7.

OS Chimeric.

PN WO200017369-A2.

XX 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2000-303209/26.

DR P-PSDB; AAY88432.

PT New enzyme designated human aspartase useful in research into Alzheimer's Disease is capable of cleaving amyloid protein precursor at the beta secretase site to produce amyloid beta peptide.

Example 9; Fig 7; 183pp; English.

This sequence represents a modified version of the human aspartase 2 (Asp2) nucleotide sequence. The sequence is used in the bacterial expression of human Asp2L. The invention relates to a protease (e.g. Asp2) capable of cleaving the beta secretase site of amyloid precursor protein (APP). The protease contains a sequence encoding the amino acid sequence DTG and a sequence encoding BSG or DTG separated by 100-300 amino acids. When mutated the APP gene causes an autosomal dominant form of Alzheimer's disease. APP localises to the cell surface membrane and

CC have a single C-terminal transmembrane domain, proteolytic processing of
 CC APP produces the amyloid beta protein, which is possibly very important
 CC in Alzheimer's disease. The invention includes a nucleotide sequence
 CC encoding the protease, a vector containing the nucleotide sequence, and a
 CC cell line comprising the vector. Methods for screening for inhibitors of
 CC beta secretase activity are also given in the invention. The human
 CC aspartase protein and nucleotide sequences and the methods for
 CC identifying inhibitors of the protease, are useful in the treatment of
 CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to
 CC correct OS field.) (Updated on 15-SEP-2003 to standardise OS field)
 XX

Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11716

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGGGATCCGCTGCTGCGACGCGGCTGGGGGGGCGCC 131
|||||
38 QLeuGlyLeu 41
|||||
132 CTGGGGGCTG 141

```

Sequence name: rmp2ndb:AAS11712

Sequence documentation:

ID AAS11712 standard; DNA; 1380 BP.

AC AAS11712;

DT 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

XX DNA encoding T7-caspase-human aspartyl protease 2a deltaTM.

XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;

XX aspartyl protease 2; Asp2; amyloid protein precursor; APP;

XX beta-secretase; Alzheimer's disease; ds; T7-caspase-HuAsp-2adeltaTM.

OS Homo sapiens.

OS Enterobacteria phage T7.

XX Key Location/Qualifiers

FT CDS 1..1380

FT sig_peptide 1..81

FT mat_peptide 82..1377

FT /note= "Mature T7-caspase-aspartyl protease-2a delta TM"

XX MO200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000797.

XX 09-MAY-2001; 2001MO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX BIENKOWSKI MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;
 DR WPI; 2001-502548/55.
 DR P-PSDB; AAU07212.
 XX

PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.

XX Example 9; Fig 7; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl terminus of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.

CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta
 CC (Abeta) peptide production, for use in designing therapeutics for the
 CC treatment or prevention of Alzheimer's disease. Probes and primers
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The
 CC present sequence represents the coding sequence of T7-caspase-human-Asp-
 CC 2a delta TM construct which has a T7 tag, a caspase 8 leader sequence and
 CC lacks the transmembrane domain. This construct was used for bacterial
 CC expression and purification of human Asp2a. (Updated on 11-SEP-2003 to
 CC standardise OS field)

XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11712

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGGGATCCGCTGCTGCGACGCGGCTGGGGGGGCGCC 131
|||||
38 QLeuGlyLeu 41
|||||
132 CTGGGGGCTG 141

```

Sequence name: rmp2ndb:AAS11716

Sequence documentation:

ID AAS11716 standard; DNA; 1380 BP.

AC AAS11716;

DT 09-SEP-2004 (revised)

DT 24-OCT-2001 (first entry)

XX DNA encoding human aspartyl protease 2a deltaTM (His)6.

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX Human: aspartyl protease 1; Asp-1; noctropic; neuroprotective;
 KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;
 KW beta-secretase; Alzheimer's disease; ds; Huhsp-2adeltaTM (His)6.
 XX
 OS Homo sapiens.
 OS Unidentified.
 FH
 FH Key Location/Qualifiers
 FT CDS 1..1380
 FT /tag= b
 FT /product= "Human Aspartyl protease-2a delta TM (His)6"
 FT /transl_except= (pos:1360..1362, aa:His)
 FT /transl_except= (pos:1363..1365, aa:His)
 FT /transl_except= (pos:1366..1368, aa:His)
 FT /transl_except= (pos:1369..1371, aa:His)
 FT /transl_except= (pos:1372..1374, aa:His)
 FT /transl_except= (pos:1375..1377, aa:His)
 FT sig_peptide 1..63
 FT /tag= a
 FT /tag= 64..1377
 FT /note= "Mature human aspartyl protease 2a deltaTM"
 FT
 FT
 FN WO200149097-A2.
 XX
 PD 12-JUL-2001.
 XX
 PF 09-MAY-2001; 2001WO-IB000797.
 XX
 PR 09-MAY-2001; 2001WO-IB000797.
 XX
 XX (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (VANR/) VAN R.
 XX
 XX Blonkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX WPI: 2001-502548/55.
 DR P-PSDB; AAU07216.
 DR
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 PT
 XX
 PS Example 10; Page 162; 185pp; English.
 XX
 CC The invention relates to a novel purified polypeptide comprising a
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl terminus of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
 CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta
 CC (Abeta) peptide production, for use in designing therapeutics for the
 CC treatment or prevention of Alzheimer's disease. Probes and primers
 CC derived from APP nucleic acid sequences are useful for detecting Hu-APP
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The
 CC present sequence represents the coding sequence of human Asp-2a delta TM
 CC (His)6 construct which has a 6 histidine tag and lacks the transmembrane
 CC domain. This construct was used for expression and purification of human
 CC Asp2a in insect cells

CC
 CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
 CC
 XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
 SQ
 Alignment of: us-10-726-967a-1 x AAS11716 ..
 Alignment segment 1/1: (+)
 Matching length: 104.00
 Matching Percent Similarity: 100.00
 Total Percent Similarity: 100.00
 Gaps: 0
 Alignment:
 22 ThrGINHISGIIYIIeAryGlenProLeuAArgSerGIYleuGIYlaIAPr 38
 64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGCGCC 113
 38 OLeuGIYleu 41
 114 CTTGGGGCTG 123
 Sequence name: rnp2ndb:AAD17879
 Sequence documentation:
 ID AAD17879 standard; cDNA; 1380 BP.
 XX
 AC AAD17879;
 XX
 DT 10-DEC-2001 (first entry)
 XX
 DE Human-Asp 2(a) lacking TM domain (His)6 protein encoding cDNA.
 XX
 KW Human: aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
 KW amyloid plaque; neuronal loss; proteolytic; noctropic; neuroprotective;
 KW ss.
 XX
 OS Homo sapiens.
 OS Synthetic.
 FH
 FH Key Location/Qualifiers
 FT CDS 1..1380
 FT /tag= a
 FT /product= "Human-Asp 2(a) lacking transmembrane domain
 FT (His)6 protein"
 FT /transl_except= (pos:640..642, aa:Gln)
 FT /transl_except= (pos:1360..1362, aa:His)
 FT /transl_except= (pos:1363..1365, aa:His)
 FT /transl_except= (pos:1366..1368, aa:His)
 FT /transl_except= (pos:1369..1371, aa:His)
 FT /transl_except= (pos:1372..1374, aa:His)
 FT /transl_except= (pos:1375..1377, aa:His)
 XX
 XX GB2357767-A.
 PD 04-JUL-2001.
 XX
 PF 22-SEP-2000; 2000GB-00023315.
 XX
 PR 23-SEP-1999; 99US-0040413.
 PR 23-SEP-1999; 99US-0155483P.
 PR 23-SEP-1999; 99KO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 XX Blonkowski MJ, Gurney M,
 PI
 XX

DR WPI: 2001-444208/48.
 DR P-PSDB; AAE10643.
 XX Polypeptide comprising fragments of human aspartyl protease with amyloid
 PT precursor protein processing activity and alpha-secretase activity, for
 PT identifying modulators useful in treating Alzheimer's disease.
 XX
 PS Example 10; Page 132; 187pp; English.
 CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
 CC proteins which lack transmembrane domain or amino terminal domain or
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid
 CC protein precursor (APP) processing activity. The proteins of the
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
 CC are useful for treating Alzheimer's disease (AD) which causes progressive
 CC dementia with consequent formation of amyloid plaques, neurofibrillary
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
 CC with the substrate under acidic conditions and determining the level of
 CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
 CC human Asp 2(a) lacking a transmembrane (TM) domain (his)6 protein which
 CC is generated from human Asp 2(a) protein by the deletion of its C-
 CC terminal TM domain and addition of hexa-histidine tag at its C-terminus
 XX
 SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD17875 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCCAGACGGGCAATCCGGCTCCCTGGCAGCGGCGCTGGGGGGGGCCCC 113
 38 oLeuGlyLeu 41
 114 CCTGGGGGCTG 123
 Sequence name: rngp2ndb: AAD17875
 Sequence documentation:
 ID AAD17875 standard; cDNA; 1380 BP.
 AC AAD17875;
 XX
 DT 10-DEC-2001 (first entry)
 XX
 DE T7-Caspase-human-Pro-Asp 2(a) protein lacking TM domain encoding cDNA.
 XX
 KW Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
 KW amyloid plaque; neuronal loss; proteolytic; neuroprotective;
 KW T7-Caspase-human-Pro-Asp 2(a) protein; ss.
 XX
 OS Homo sapiens.
 OS Synthetic.
 OS
 FH Key Location/Qualifiers
 FT CDS 1..1380
 FT /tag= a
 FT /product= "T7-Caspase-human-Pro-Asp 2(a) protein lacking
 FT transmembrane domain"
 FT
 XX

PN GB2357767-A.
 XX
 XX 04-JUL-2001.
 PD
 XX
 PF 22-SEP-2000; 2000GB-00023315.
 XX
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Bienkowski MJ, Gurney M;
 XX
 XX WPI: 2001-444208/48.
 DR P-PSDB; AAE10639.
 DR
 XX
 PT Polypeptide comprising fragments of human aspartyl protease with amyloid
 PT precursor protein processing activity and alpha-secretase activity, for
 PT identifying modulators useful in treating Alzheimer's disease.
 XX
 PS Example 9; Fig 7; 187pp; English.
 CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
 CC proteins which lack transmembrane domain or amino terminal domain or
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid
 CC protein precursor (APP) processing activity. The proteins of the
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
 CC are useful for treating Alzheimer's disease (AD) which causes progressive
 CC dementia with consequent formation of amyloid plaques, neurofibrillary
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
 CC with the substrate under acidic conditions and determining the level of
 CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
 CC human T7-Caspase-human-Pro-Asp 2(a) protein lacking a transmembrane (TM)
 CC domain. T7-Caspase-human-Pro-Asp 2(a) protein is generated from human Asp
 CC 2(a) protein by the addition of a T7 tag and caspase 8 leader sequence at
 CC its N-terminal end and the deletion of its C-terminal TM domain
 XX
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD17875 ..
 Alignment segment 1/1: (+)

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 82 ACCCAGACGGGCAATCCGGCTCCCTGGCAGCGGCGCTGGGGGGGGCCCC 131
 38 oLeuGlyLeu 41
 132 CCTGGGGGCTG 141
 Sequence name: rngp2ndb: AAD13035
 Sequence documentation:
 ID AAD13035 standard; cDNA; 1380 BP.
 AC AAD13035;
 XX
 DT 23-OCT-2001 (first entry)
 XX

```
XX DE Human-Asp2(a) deltatm (His)6 protein cDNA.
XX KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX KM neuroprotective; antisense therapy; Asp2(a) deltatm (His)6 protein;
XX KM gene therapy; ss.
XX OS Homo sapiens.
XX OS Synthetic.
XX FH Key
XX FH CDS
XX FT 1..1380
XX FT /tag= a
XX FT /product= "Human Asp2(a) deltatm (His)6 protein"
XX FT /transl_except= (pos:640..642, aa:Gln)
XX FT /transl_except= (pos:1360..1362, aa:His)
XX FT /transl_except= (pos:1363..1365, aa:His)
XX FT /transl_except= (pos:1366..1368, aa:His)
XX FT /transl_except= (pos:1369..1371, aa:His)
XX FT /transl_except= (pos:1372..1374, aa:His)
XX FT /transl_except= (pos:1375..1377, aa:His)
XX FT 1..65
XX FT /tag= d
XX FT /note= "Encodes N-terminal 1-21 amino acids of human
XX FT Asp2(a) deltatm (His)6 protein"
XX FT 66..90
XX FT /tag= b
XX FT 91..1377
XX FT /tag= c
XX FT /product= "Mature human Asp2(a) deltatm (His)6 protein"
XX PN W0200150829-A2.
XX PD 19-JUL-2001.
XX PF 09-MAY-2001; 2001WO-IB000799.
XX PR 09-MAY-2001; 2001WO-IB000799.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (GURN/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2001-483072/52.
XX DR P-PSDB; AAE06873.
XX XX
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT secretase 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX PS Example 10; Page 162; 185pp; English.
XX XX
XX CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX CC precursor protein (APP) isoforms and their corresponding DNA molecules.
XX CC Human aspartyl proteases can act as beta-secretase proteases useful for
XX CC treating Alzheimer's disease. APP isoforms are useful for identifying
XX CC modulators of amyloid-beta peptide production, for use in designing
XX CC therapeutics for the treatment and prevention of Alzheimer's disease,
XX CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX CC and neuronal loss. APP isoforms are also used in methods for identifying
XX CC inhibitors and modulators of human Asp2 activity. The invention relates
XX CC to a method for identifying agents that modulate the activity of human
XX CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX CC as a means to screen in cellular assays for the inhibitors of beta- and
XX CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
```

```
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present cDNA sequence encodes Human aspartyl protease 2a (Hu-Asp2a)
CC deltatm (His)6 protein which is obtained by the deletion of C-terminal
CC transmembrane domain and addition of a hexa-histidine tag at the C-
CC terminal end of Hu-Asp2a. Human Asp2a has beta-secretase activity
XX SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD13035 ..
Alignment segment 1/1: (+)
Quality: 104.00
Matching length: 20
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Total Percent Similarity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
64 ACCGACGACGCGCATCCGCTGCCCTCGCGAGCGGCTGGGGGCCCCC 113
38 OLeuGlyLeu
114 CTTGGGGCTG
Sequence name: trnp2ndb: AAD13031
Sequence documentation:
ID AAD13031 standard; cDNA; 1380 BP.
XX AC AAD13031;
XX DT 23-OCT-2001 (first entry)
XX DE T7-Caspase-Human-pro-Asp2(a) deltatm protein cDNA.
XX KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX KM neuroprotective; antisense therapy; caspase-pro-Asp2(a) deltatm protein;
XX KM gene therapy; ss.
XX OS Homo sapiens.
XX OS Synthetic.
XX FH Key
XX FH CDS
XX FT 1..1380
XX FT /tag= a
XX FT /product= "T7-Caspase-Human-pro-Asp2(a) deltatm protein"
XX PN W0200150829-A2.
XX PD 19-JUL-2001.
XX PF 09-MAY-2001; 2001WO-IB000799.
XX PR 09-MAY-2001; 2001WO-IB000799.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (GURN/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2001-483072/52.
XX DR P-PSDB; AAE06869.
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
```



```

XX Key      Location/Qualifiers
FH 1..1383
FT /tag= a
FT /product= "Human-Asp-2(a) deltaTM (His)6 protein"
FT /transl_except= (pos:640..642,aa:Gln)
FT /transl_except= (pos:1360..1362,aa:His)
FT /transl_except= (pos:1363..1365,aa:His)
FT /transl_except= (pos:1366..1368,aa:His)
FT /transl_except= (pos:1369..1371,aa:His)
FT /transl_except= (pos:1372..1374,aa:His)
FT /transl_except= (pos:1375..1377,aa:His)
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX
XX WPI: 2001-290516/30.
XX
XX P-PSDB; AA02595.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 10; Page 160-161; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is a cDNA encoding human
XX Asparyl protease 2a (Asp 2a) deltaTM (His)6 protein which is obtained by
XX deleting the transmembrane domain and adding a histidine tag at the C-
XX terminal end. This sequence has beta-secretase protease activity
XX
XX SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06753 ..
XX
XX Alignment segment 1/1: (+)
XX
XX      Quality: 104.00      Score: 35.9
XX      Matching length: 20      Total length: 20
XX      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
XX      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
XX
XX      Gaps: 0
XX
XX Alignment:
XX
XX 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38
XX |||||
XX 64 ACCGACGACGGGCAATCCGGCTCCCTGCGACAGCGGCTGGGGGGGCGCCC 113
XX |||||
XX 38 OLeuGlyLeu 41
XX |||||
XX 114 CTTGGGGGCTG 123
XX
XX Sequence name: rngp2ndb:AA511531
XX
XX Sequence documentation:
XX ID AA511531 standard; cDNA; 1380 BP.
XX

```

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AC AA511531;
XX
XX 24-OCT-2001 (first entry)
XX
XX Human cDNA encoding Human-pro-Asp 2(a) delta TM (His)6.
XX
XX Human, Asparyl protease; beta-secretase; neurotropic; ASP2;
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
XX amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM (His)6; ss; mutant.
XX
XX Homo sapiens.
XX
XX Synthetic.
XX
XX Key      Location/Qualifiers
FH 1..1380
FT /tag= a
FT /product= "Human-pro-Asp 2(a) delta TM (His)6"
FT /transl_except= (pos:639..642,aa:Gln)
FT /transl_except= (pos:1360..1376,aa:His-His-His-His-
FT His)
FT sig_peptide 1..63
FT /tag= b
FT mat_peptide 64..1377
FT /tag= c
FT /label= Mature_Human_pro_Asp_2(a)_delta_TM_(His)6
XX
XX WO200149098-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M B.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI: 2001-502549/55.
XX
XX P-PSDB; AAU06617.
XX
XX Novel purified polypeptide comprising fragment of mammalian asparyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 10; Page 162; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian asparyl protease (Asp)2 protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the Asp proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-
XX beta (Abeta) peptide production. APP is also useful in designing
XX therapeutics for the treatment or prevention of Alzheimer's disease. APP
XX comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
XX associated with increased levels of Abeta processing is useful in assays
XX relating the Alzheimer's research. The expression vector is useful for
XX recombinantly expressing APP. Nucleic acids that hybridize to Asp
XX oligonucleotides are useful as probes or primers. The probes are useful

```

CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence encodes Human-pro- Asp 2(a) delta TM
CC protein, which lacks the C-terminal transmembrane domain and has a His
CC tag to aid purification
XX
SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11531 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGCTG
|||||
123
```

Sequence name: rmp2ndb:AAS11527

Sequence documentation:

ID AAS11527 standard; cDNA; 1380 BP.

XX AAS11527;

DT 24-OCT-2001 (first entry)

DE Human T7-Caspase-Human-pro-Asp 2(a) delta TM fusion protein cDNA.

XX Human; Aspartyl protease; beta-secretase; nootropic; ASP2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

KM amyloid-beta; Abeta; T7-Caspase-Human-pro-Asp 2(a) delta TM; ss.

XX Homo sapiens.

OS Synthetic.

PH Key Location/Qualifiers

FT CDS 1..1380

FT sig_peptide /product= "T7-Caspase-Human-pro-Asp 2(a) delta TM fusion protein"

FT mat_peptide /tag= b

FT sig_peptide /note= "Caspase leader sequence"

FT sig_peptide /label= Mature_Asp_2(a)

FT sig_peptide

XX WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001, 2001MO-IB000798.

XX 09-MAY-2001, 2001MO-IB000798.

XX 09-MAY-2001, 2001MO-IB000798.

XX 09-MAY-2001, 2001MO-IB000798.

XX 09-MAY-2001, 2001MO-IB000798.

XX 09-MAY-2001, 2001MO-IB000798.

DR P-PSDB; AAU06613.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Example 9; Fig 7; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of
CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2
CC transmembrane domain and the Asp2 protein, and where the polypeptide and
CC the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. The invention also details polynucleotides for the Asp proteins
CC and vectors expressing them, and a polypeptide (isoform of amyloid
CC protein precursor (APP) comprising the amino acid sequence of an APP or
CC its fragment containing an APP cleavage site recognizable by a mammalian
CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (Abeta) peptide production. APP is also useful in designing
CC therapeutic for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
CC associated with increased levels of Abeta processing is useful in assays
CC relating the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence encodes T7-caspase- Human-pro-Asp
CC 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid
CC purification when expressed in E. coli and a Caspase leader sequence
XX
SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11527 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38
|||||
82 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGGCTGGGGGGCGCCCC 131
|||||
38 OLeuGlyLeu
|||||
132 CTTGGGGCTG
|||||
141
```

Sequence name: rmp2ndb:ABL52471

Sequence documentation:

ID ABL52471 standard; cDNA; 1380 BP.

XX ABL52471;

XX 16-JUL-2002 (first entry)

DE Human Asp-2(a)deltaTM(His)6 nucleotide sequence SEQ ID NO:31.

KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

XX Chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

OS Homo sapiens.

XX Homo sapiens.

```

FH Key Location/Qualifiers
FT CDS 1..1380
FT /tag= a
FT /product= "Human Asp-2(a)deltaTM(His)6"
FT /transl_except= (pos:640..642,aa:Gln)
FT /transl_except= (pos:1360..1362,aa:His)
FT /transl_except= (pos:1363..1365,aa:His)
FT /transl_except= (pos:1366..1368,aa:His)
FT /transl_except= (pos:1371,aa:His)
FT /transl_except= (pos:1372..1374,aa:His)
FT /transl_except= (pos:1375..1377,aa:His)

```

GB2367060-A.

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PHAA) PHARMACIA & UPJOHN CO.

Blenkowskei MJ, Gurney M;

WPI; 2002-397167/43.

P-PSDB; ABB78604.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl

protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 10; Page 132; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see AB152456) where the nucleotide sequence encodes a polypeptide having Asp1 domain; (3) a purified polynucleotide (III') comprising a sequence that hybridises under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV) comprising (III) or (III'); and (5) a host cell (V) transformed or transfected with (III), (III'), and/or (IV). The hu-Asp1 protease or substrate (I) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence encodes human Asp-2(a)deltaTM(His)6, which is given in an example from the present invention

SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: ua-10-726-967a-1 x AB152471 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total Length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHISGlyIleArgLeuProleuArgSerGlyLeuGlyAlaApr 38
64 ACCGACGACGGCATTCCGCTCCCTGCGACGCGCCCTGGGGGGGCGCC 113
38 OLeuGlyLeu
114 CCGGGGGGCTG
123

```

Sequence name: rngp2ndb:AB152467

Sequence documentation:
ID AB152467 standard; cDNA; 1380 BP.

AC AB152467;

DT 16-JUL-2002 (first entry)

DE T7-caspase-human-pro-Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:23.

KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
amyloid precursor protein; APP; gene; ss.

OS Homo sapiens.

```

FH Key Location/Qualifiers
FT CDS 1..1380
FT /tag= a
FT /product= "T7-caspase-human-pro-Asp-2(a)deltaTM"

```

GB2367060-A.

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PHAA) PHARMACIA & UPJOHN CO.

Blenkowskei MJ, Gurney M;

WPI; 2002-397167/43.

P-PSDB; ABB78600.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl

protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 9; Fig 7; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see AB152456) where the nucleotide sequence encodes a polypeptide having Asp1 domain; (3) a purified polynucleotide (III') comprising a sequence that hybridises under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV) comprising (III) or (III'); and (5) a host cell (V) transformed or

CC transacted with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes human T7-caespase-human-pro-Asp-2(a)delatm, which is
 CC given in an example from the present invention

XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52467 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

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22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
82 ACCCAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGGGGGGCCCC 131
38 OleuGlyLeu
132 CCTGGGGGCTG
141

```

Sequence name: rmgp2ndb:ADJ94343

Sequence documentation:

ID ADJ94343 standard; cDNA; 1380 BP.

XX AC ADJ94343;

XX DT 03-JUN-2004 (first entry)

XX DE Human-pro-Asp-2(a)delat(His)6 cDNA.

XX KM Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX KM nootropic; neuroprotective; amyloid beta; mutant.

XX OS Homo sapiens.

XX OS Synthetic.

XX PN US6706485-B1.

XX PD 16-MAR-2004.

XX PF 12-APR-2000; 2000US-00548376.

XX PR 24-SEP-1998; 98US-0101594P.

XX PR 23-SEP-1999; 99US-00404133.

XX PR 23-SEP-1999; 99US-0155493P.

XX PR 23-SEP-1999; 99WO-US020881.

XX PR 13-OCT-1999; 99US-00416901.

XX PA (PHAA) PHARMACIA & UPJOHN CO.

XX PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX DR WPI; 2004-236722/22.

XX DR P-PSDB; ADJ94344.

XX PT Identifying agents that modulate activity of Asp2 aspartyl protease

XX PT useful for treating or preventing Alzheimer's disease involves comparing

XX PT APP processing activity of protease in presence and absence of test

XX PT agent.

PS Example 10; SEQ ID NO 31; 1099p; English.

XX The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminal amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP65-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94343 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCCAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGGGGGGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG
123

```

Sequence name: rmgp2ndb:ADJ94335

Sequence documentation:

ID ADJ94335 standard; cDNA; 1380 BP.

XX AC ADJ94335;

XX DT 03-JUN-2004 (first entry)

XX DE Human T7-Caspase-human-pro-Asp-2(a)delatm cDNA.

XX KM Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX KM nootropic; neuroprotective; amyloid beta; mutant.

XX OS Homo sapiens.

XX OS Synthetic.

XX PN US6706485-B1.

XX 16-MAR-2004.
 PD 12-APR-2000; 2000US-00548376.
 XX
 PF 24-SEP-1998; 98US-0101594P.
 XX 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHMA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
 XX
 DR MPI; 2004-236722/22.
 XX P-PSDB; AD050431.
 DR
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.
 XX
 PS Example 9; SEQ ID NO 23; 109bp; English.
 XX
 CC The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising the
 CC vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptide, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminal amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW
 CC or APP695-SW-KK, or a V to P mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.
 XX
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AD050431 ..
 Alignment segment 1/1: (+)
 Quality: 104.00 Score: 35.9
 Matching length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0
 Alignment:
 22 ThGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
 82 ACCAGACAGGACATCCGCTCCCTGCGAGCGCCCTGGGGGGGCGCC 131

38 0LeuGlyLeu
 |||||
 132 CCTGGGGCGCTG 141
 Sequence name: rngp2nrb:AD050431
 ID AD050431 standard; DNA; 1380 BP.
 AC AD050431;
 XX
 DT 29-JUL-2004 (first entry)
 XX
 DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA.
 XX
 KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
 KW Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.
 XX
 OS Homo sapiens.
 OS Chimeric.
 OS Unidentified.
 XX
 FH Key Location/Qualifiers
 FT CDS 1..1380
 FT /tag= a
 FT /product= "T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric
 FT protein"
 XX
 PN US6737510-B1.
 XX
 PD 18-MAY-2004.
 XX
 PF 12-APR-2000; 2000US-00548373.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHMA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
 XX
 DR MPI; 2004-387112/36.
 DR P-PSDB; AD050431.
 DR
 XX
 PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
 PT involved in processing amyloid precursor protein into amyloid beta,
 PT useful in preparing a composition for treating or preventing Alzheimer's
 PT disease.
 XX
 PS Example 9; SEQ ID NO 23; 109bp; English.
 XX
 CC The invention relates to a method for identifying an agent that decreases
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase
 CC cleavage site of the amyloid precursor protein (APP). The invention is
 CC useful in preparing a composition for treating or preventing Alzheimer's
 CC disease. It is also useful in gene therapy. The present sequence is T7-
 CC Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA. This sequence is used to
 CC illustrate the method of the invention.
 XX
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AD050431 ..
 Alignment segment 1/1: (+)
 Quality: 104.00 Score: 35.9
 Matching length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00

Gaps: 0
Alignment:

```

22 ThrglnhlsGlyleargLeuProleuArgSerglyleuGlyAlaPr 38
82 ACCGACGACGGCATCCGGCTGCCGCGAGCGGCTGGGGGGGCGCC 131
38 oLeuGlyleu 41
132 CCGGGGCGCTG 141

```

Sequence name: rngp2ndb:AD050439

Sequence documentation:
ID AD050439 standard; DNA; 1380 BP.

```

AC AD050439;
XX
XX 29-JUL-2004 (first entry)
DT
XX Human Asp-2(a)deltaTM(His)6 DNA.
DE
XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KM Alzheimer's disease; gene therapy; human; gene; ds.
XX Homo sapiens.
OS Synthetic.
OS
XX Key Location/Qualifiers
FH 1..1380
FT /product= "Human Asp-2(a)deltaTM(His)6 protein"
FT /transl_except= (pos:640..642, aa:Gln)
FT /transl_except= (pos:1360..1362, aa:His)
FT /transl_except= (pos:1363..1365, aa:His)
FT /transl_except= (pos:1366..1368, aa:His)
FT /transl_except= (pos:1369..1371, aa:His)
FT /transl_except= (pos:1372..1374, aa:His)
FT /transl_except= (pos:1375..1377, aa:His)

```

```

PN US6737510-B1.
XX
XX 18-MAY-2004.
PD
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI, 2004-387112/36.
DR P-PSDB; AD050440.
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
XX Example 10; SEQ ID NO 31; 108bp; English.
XX
XX The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is human

```

CC Asp-2(a)deltaTM(His)6 DNA. This sequence is used to illustrate the method
CC of the invention.

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050439 ..

Alignment segment 1/1: (++)

	Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```

22 ThrglnhlsGlyleargLeuProleuArgSerglyleuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCGCGAGCGGCTGGGGGGGCGCC 113
38 oLeuGlyleu 41
114 CCGGGGCGCTG 123

```

Sequence name: rngp2ndb:ADR75344

Sequence documentation:
ID ADR75344 standard; DNA; 1380 BP.

XX ADR75344;

DT 18-NOV-2004 (first entry)

DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; human; caspase; chimeric;
KM gene; ds.

XX Homo sapiens.
OS Chimeric.
OS Unidentified.

```

FH Key Location/Qualifiers
FT 1..1380
FT /product= "T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric
FT protein"
XX
XX US2004166507-A1.
XX
XX 26-AUG-2004.
PD
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 13-OCT-1999; 99US-00416901.
XX
XX (GURN/) GURNEY M E.
PA (BIEN/) BIENKOWSKI M J.
PA (HEIN/) HEINRICHSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI, 2004-624916/60.
DR P-PSDB; ADR75345.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
PT

```

PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.

XX Example 9; SEQ ID NO 23; 107pp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl
CC protease (Asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridise with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the human T7-Caspase-Human-pro-Asp-2(a)deltaTM
CC chimeric DNA. This sequence is used to illustrate the method of the
CC invention.

XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75344 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
82 ACCCAGACGCGATCCGCTGCCCTCCGCGACGCGCTGGGGGGGCGCC 131
|||
38 oLeuGlyLeu 41
|||
132 CCTGGGGGCTG 141
```

Sequence name: rmp2ndb:ADR75352

Sequence documentation:

ID ADR75352 standard; DNA; 1380 BP.

XX ADR75352;

XX 18-NOV-2004 (first entry)

XX Human Asp-2(a)deltaTM(His)6 DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; human; gene; ss.

XX Homo sapiens.
OS Synthetic.

XX Key Location/Qualifiers
FT CDS 1..1380

FT /tag= a
FT /product= "Human Asp-2(a)deltaTM(His)6 protein"
FT /transl_except= (pos:640..642, aa:Gln)
FT /transl_except= (pos:1360..1362, aa:His)
FT /transl_except= (pos:1363..1365, aa:His)
FT /transl_except= (pos:1366..1368, aa:His)
FT /transl_except= (pos:1369..1371, aa:His)
FT /transl_except= (pos:1372..1374, aa:His)
FT /transl_except= (pos:1375..1377, aa:His)
XX US2004166507-A1.

XX 26-AUG-2004.

XX 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWSKI M J.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Gurney ME, Bienkowsk MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI: 2004-624916/60.

XX P-P-SDB; ADR75353.

XX Novel purified/isolated polynucleotide encoding polypeptide having

XX aspartyl protease activity involved in processing amyloid precursor

XX protein into amyloid beta, useful in identifying agent decreasing

XX activity of aspartyl protease.

XX Example 10; SEQ ID NO 31; 107pp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl

XX protease (Asp) polypeptides having aspartyl protease activity involved in

XX processing amyloid precursor protein (APP) into amyloid beta. The

XX invention also relates to a method for identifying an agent that

XX decreases the protease activity of the Asp. Asp DNA is useful in

XX chromosome identification as they can hybridise with a specific location

XX on a human chromosome and in identifying the relationship between genes

XX and diseases (particular gene responsible for causing diseases). It is

XX also useful for identifying candidates to modulate the progression of

XX Alzheimer's disease. Asp is useful in raising antibodies that are useful

XX in diagnostic assay for detecting Hu-Asp polypeptide expression. The

XX present sequence is human Asp-1 DNA. This sequence is used to illustrate

XX the method of the invention.

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75352 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGACGCGATCCGCTGCCCTCCGCGACGCGCTGGGGGGGCGCC 113
|||
38 oLeuGlyLeu 41
|||
114 CCTGGGGGCTG 123
```

Sequence name: rmp2ndb:ADJ57788

Sequence documentation:

ID ADJ57788 standard; DNA; 1383 BP.

XX ADJ57788;

XX 06-MAY-2004 (first entry)

DE DNA sequence for BACE N-Q R57KDEL.
XX
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease; ds.
XX
XX Synthetic.
OS
OS
FH Key Location/Qualifiers
FT CDS 1..1383
FT /*tag= a
FT /product= "BACE protein"
XX
XX WO2004011641-A2.
XX
XX 05-FEB-2004.
XX
XX 25-JUL-2003; 2003WO-GH003200.
XX
XX 26-JUL-2002; 2002US-0398681P.
XX
XX (ASTE-) ASTEX TECHNOLOGY LTD.
XX
XX Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX P-PSDB; ADJ57789.
XX
XX WPI: 2004-169242/16.
XX
XX P-PSDB; ADJ57789.
XX
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX
XX
XX Disclosure; SEQ ID NO 17; 145pp; English.
XX
XX
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE encoding
CC sequence.
XX
XX
SQ Sequence 1383 BP; 294 A; 401 C; 402 G; 286 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ57788 ..
Alignment segment 1/1: (+)
Matching length: 104.00
Total length: 35.9
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Total Percent Similarity: 100.00
Gaps: 0
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70 ACCCGACGCGGATCCGGCTGCCCTGGCGACGCGGCTGGGGGCGCCCC 119
38 oLeuGlyLeu 41
120 CCTGGGGGCTG 129
Sequence name: rngp2ndb:ADJ57774
Sequence documentation:
ID ADJ57774 standard; DNA; 1386 BP.
XX
XX ADJ57774;
AC
XX
XX 06-MAY-2004 (first entry)
XX

DE DNA sequence for BACE N-Q.
XX
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease; ds.
XX
XX Synthetic.
OS
OS
FH Key Location/Qualifiers
FT CDS 1..1386
FT /*tag= a
FT /product= "BACE protein"
XX
XX WO2004011641-A2.
XX
XX 05-FEB-2004.
XX
XX 25-JUL-2003; 2003WO-GH003200.
XX
XX 26-JUL-2002; 2002US-0398681P.
XX
XX (ASTE-) ASTEX TECHNOLOGY LTD.
XX
XX Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX P-PSDB; ADJ57775.
XX
XX WPI: 2004-169242/16.
XX
XX P-PSDB; ADJ57775.
XX
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX
XX
XX Disclosure; SEQ ID NO 3; 145pp; English.
XX
XX
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE encoding
CC sequence.
XX
XX
SQ Sequence 1386 BP; 294 A; 402 C; 404 G; 286 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ57774 ..
Alignment segment 1/1: (+)
Matching length: 104.00
Total length: 35.9
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Total Percent Similarity: 100.00
Gaps: 0
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70 ACCCGACGCGGATCCGGCTGCCCTGGCGACGCGGCTGGGGGCGCCCC 119
38 oLeuGlyLeu 41
120 CCTGGGGGCTG 129
Sequence name: rngp2ndb:ADJ57782
Sequence documentation:
ID ADJ57782 standard; DNA; 1386 BP.
XX
XX ADJ57782;
AC
XX
XX 06-MAY-2004 (first entry)
XX

DE DNA sequence for BACE N-Q R56KR57K.
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease; ds.
XX
XX
OS Synthetic.
XX
XX
FH Key Location/Qualifiers
FT CDS 1..1386
FT /*tag= a
FT /product= "BACE protein"
XX
XX WO2004011641-A2.
XX
XX PD 05-FEB-2004.
XX
XX PF 25-JUL-2003; 2003WO-GB003200.
XX
XX PR 26-JUL-2002; 2002US-0398681P.
XX
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.
XX
XX PI Vulliard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX
XX DR WPI; 2004-169242/16.
XX
XX DR P-PSDB; ADJ57783.
XX
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
XX
XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX
XX PT syndrome.
XX
XX PS Disclosure; SEQ ID NO 11; 145pp; English.
XX
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)
XX
XX CC protein. The compound or the composition is useful in medicine and the
XX
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,
XX
XX CC compounds, pharmaceutical compositions, medicament, drug or other
XX
XX CC composition comprising the compound is useful for treating or preventing
XX
XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
XX
XX CC present sequence represents the DNA sequence for a BACE encoding
XX
XX CC sequence.
XX
SQ Sequence 1386 BP; 297 A; 401 C; 402 G; 286 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ57782 ..
Alignment segment 1/1: (+)
Matching Quality: 104.00
Total length: 35.9
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Total Percent Similarity: 100.00
Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHieGlyIleAArgLeuProleuAArgserGlyLeuGlyAlaApr 38
|||
70 ACCCAGCAGCGGATCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 119
|||
38 olounglyLeu 41
|||
120 CCGGGGGCTG 129
Sequence name: rngp2ndb:ADJ57786
Sequence documentation:
ID ADJ57786 standard; DNA, 1386 BP.
XX
XX AC ADJ57786;
XX
XX DT 06-MAY-2004 (first entry)
XX

DE DNA sequence for BACE N-Q R57K.
XX
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW Alzheimer's disease; ds.
XX
XX
OS Synthetic.
XX
XX
FH Key Location/Qualifiers
FT CDS 1..1386
FT /*tag= a
FT /product= "BACE protein"
XX
XX WO2004011641-A2.
XX
XX PD 05-FEB-2004.
XX
XX PF 25-JUL-2003; 2003WO-GB003200.
XX
XX PR 26-JUL-2002; 2002US-0398681P.
XX
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.
XX
XX PI Vulliard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX
XX DR WPI; 2004-169242/16.
XX
XX DR P-PSDB; ADJ57787.
XX
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or
XX
XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX
XX PT syndrome.
XX
XX PS Disclosure; SEQ ID NO 15; 145pp; English.
XX
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)
XX
XX CC protein. The compound or the composition is useful in medicine and the
XX
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,
XX
XX CC compounds, pharmaceutical compositions, medicament, drug or other
XX
XX CC composition comprising the compound is useful for treating or preventing
XX
XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
XX
XX CC present sequence represents the DNA sequence for a BACE encoding
XX
XX CC sequence.
XX
SQ Sequence 1386 BP; 295 A; 402 C; 403 G; 286 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ57786 ..
Alignment segment 1/1: (+)
Matching Quality: 104.00
Total length: 35.9
Matching Percent Similarity: 100.00
Total Percent Identity: 100.00
Total Percent Similarity: 100.00
Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHieGlyIleAArgLeuProleuAArgserGlyLeuGlyAlaApr 38
|||
70 ACCCAGCAGCGGATCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 119
|||
38 olounglyLeu 41
|||
120 CCGGGGGCTG 129
Sequence name: rngp2ndb:ADC72736
Sequence documentation:
ID ADC72736 standard; DNA, 1470 BP.
XX
XX AC ADC72736;
XX
XX DT 18-DEC-2003 (first entry)
XX

DE Human beta-site aspartyl protease cleaving enzyme catalytic domain gene.
XX
XX de; gene; neuroprotective; nootropic; crystalline;
XX Beta-site APP cleaving enzyme; BACE; aspartyl protease;
XX Alzheimer's disease; protein co-ordinate data.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 1..1470
XX FT /*tag= a
XX PN WO2003012089-A2.
XX PD 13-FEB-2003.
XX XX
XX 26-JUL-2002; 2002WO-GB003461.
XX XX
XX 26-JUL-2001; 2001US-0308366P.
XX XX
XX (ASTE-) ASTEX TECHNOLOGY LTD.
XX (JANC) JANSSEN PHARM NV.
XX
XX Von J, Cleasby A, Bruinzeel WD, Masure SLJ, Tickle I, Sharff A;
XX WPI; 2003-239524/23.
XX DR P-PSDB; ADCT72735.
XX XX
XX New Beta-site APP cleaving enzyme (BACE) proteins and protein crystal,
XX PT useful in designing compounds that inhibit or modulate BACE, in drug
XX PT screening assays, and in identifying receptors.
XX
XX Disclosure; Fig 2B; 272pp; English.
XX
XX The invention relates to a new crystalline form of Beta-site APP cleaving
XX enzyme (BACE) or its functional portion having an active site containing
XX one or more ligands other than the natural substrate or the substrate
XX that occurs naturally or physiologically within the active site.
XX Inhibitors of BACE protein or its functional portion is useful for
XX preparing a composition or medicament for inhibiting BACE or the
XX production of A-beta or its fragments, and in therapy for treating
XX Alzheimer's disease. The BACE crystals and proteins may be used to design
XX compounds that inhibit or modulate BACE, in drug screening assays, and in
XX identifying receptors. This sequence represents the coding sequence for
XX the BACE protein. The corresponding protein given in the specification
XX represents the BACE protein from amino acid 76 of the full length
XX protein.
XX
XX Sequence 1470 BP; 352 A; 399 C; 396 G; 323 T; 0 U; 0 Other;
SQ
Alignment of: us-10-726-967a-1 x ADCT72736 ..
Alignment segment 1/1: (+)
Matching Length: 104.00 Bscore: 35.9
Matching Percent: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValNAr 38
154 ACCGACGACGGGATCCGGCTGCTGCGCAGCGGCTGGGAGAGCTCC 203
38 GLeuGlyLeu 41
204 ACTGGGACTG 213
Sequence name: rngp2ndb:AAA28278
Sequence documentation:

ID AAA28278 standard; cDNA; 1503 BP.
XX
XX AAA28278;
AC
XX 12-FEB-2001 (first entry)
DT
XX
XX Human cDNA encoding beta-secretase.
DE
XX
XX Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; human;
XX Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 1..1503
XX FT /*tag= a
XX FT /product= "Beta secretase"
XX FT /note= "No stop codon given"
XX FT sig_peptide 1..135
XX FT mat_peptide 136..1503
XX FT /*tag= b
XX FT /*tag= c
XX
XX WO200058479-A1.
XX
XX 05-OCT-2000.
XX PD
XX 23-MAR-2000; 2000WO-US007755.
XX PF
XX 26-MAR-1999; 99US-00277229.
XX PR
XX (AMGE-) AMGEN INC.
XX
XX Ciltrom M, Vassar RJ, Bennett BD;
XX WPI; 2000-594643/56.
XX DR P-PSDB; AAY94767.
XX
XX Isolated beta-secretase nucleic acids and encoded polypeptides, useful
XX PT for diagnosis and gene therapy of Alzheimer's disease.
XX
XX Claim 1; Fig 1; 145pp; English.
PS
XX This invention relates to 3 nucleotide sequences encoding beta-secretase
XX proteins. Beta-secretase is an enzyme involved in the production of one
XX of the components of amyloid plaques involved in Alzheimer's disease. The
XX invention includes an expression vector comprising the nucleotide
XX sequence, a host cell comprising the expression vector, and a process for
XX producing the protein through culturing the transformed cells. Also
XX included in the invention are a polypeptide derivative of the beta-
XX secretase protein, a fusion protein comprising beta-secretase fused to a
XX heterologous amino acid sequence, and a method for modulating the levels
XX of beta-secretase polypeptide in a mammal comprising administering the
XX polynucleotide sequence. Beta-secretase exhibits neuroprotective and
XX neurotrophic activity. The beta-secretase nucleotide sequence may be used to
XX map locations of the beta-secretase gene and related genes on chromosomes
XX and as hybridization probes in diagnostic assays to test for the presence
XX of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's
XX syndrome, and amyloid angiopathy. The nucleotide sequence may also be
XX used as anti-sense inhibitors of beta-secretase expression, in gene
XX therapy of Alzheimer's disease, and for the identification of compounds
XX that modulate beta-secretase activity. Antibodies to the beta-secretase
XX protein may be used for in vitro and in vivo diagnostic purposes to
XX detect the presence of beta-secretase polypeptide in a body fluid or cell
XX sample. The present sequence represents human cDNA encoding beta-
XX secretase
XX
SQ Sequence 1503 BP; 305 A; 448 C; 431 G; 319 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAA28278 ..
Alignment segment 1/1: (+)

Quality: 104.00 Score: 35.9
 Matching length: 20 Total length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

```

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCGGCTGCCCTGCCGACGCGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CTGGGGGCTG 123

```

Sequence name: rngp2ndb:AAA59550

Sequence documentation:

ID AAA59550 standard; DNA; 1503 BP.

AC AAA59550;

XX 14-NOV-2000 (first entry)

XX DNA encoding a human beta-secretase enzyme.

XX Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;
 KM amyloid plaque component; Alzheimer's disease; amyloidogenic disease;
 KW inhibitor; ss.

XX Homo sapiens.

XX Key Location/Qualifiers
 FH 1..1503
 FT /*tag= a
 FT /product= "beta-secretase"
 FT /note= "no termination codon given"

XX MO200047618-A2.

XX 17-AUG-2000.

XX 10-FEB-2000; 2000MO-US003819.

XX 10-FEB-1999; 99US-0119571P.

XX 15-JUN-1999; 99US-0139172P.

XX (ELAN-) ELAN PHARM INC.

XX Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M;
 PI Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;

XX MPI; 2000-533011/48.
 DR P-PSDB; AAB07896.

XX Purified beta-secretase protein used in assays to discover inhibitors
 PT which can be used for the treatment of amyloidogenic diseases e.g.
 PT Alzheimer's disease.

XX Disclosure; Fig 1A; 121pp; English.

XX The specification describes a beta-secretase enzyme. The enzyme cleaves
 CC beta-amyloid precursor protein to produce beta-amyloid peptide. This
 CC enzyme is therefore implicated in the production of amyloid plaque
 CC components which accumulate in the brains of individuals afflicted with
 CC Alzheimer's disease. Inhibitors of beta-secretase are administered to a
 CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-
 CC like pathology to test if they maintain or improve cognitive ability or
 CC reduce the plaque burden. The compounds are used for the treatment of
 CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence
 CC encodes a human beta-secretase enzyme
 XX

SO Sequence 1503 BP; 305 A; 448 C; 431 G; 319 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAA59550 ..
 Alignment segment 1/1: (+)

Quality: 104.00 Score: 35.9
 Matching length: 20 Total length: 20
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00
 Gaps: 0

Alignment:

```

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCGGCTGCCCTGCCGACGCGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CTGGGGGCTG 123

```

Sequence name: rngp2ndb:ACC84849

Sequence documentation:

ID ACC84849 standard; DNA; 1506 BP.

XX ACC84849;

XX 12-SEP-2003 (first entry)

XX Human memapsin 2 protein encoding DNA.

XX Memapsin 1; neurotropic; neuroprotective; memapsin 2; beta secretase;
 KW beta-amyloid protein; Alzheimer's disease; human; gene; ds.

XX Homo sapiens.

XX Key Location/Qualifiers
 FH 1..1506
 FT /*tag= a
 FT /product= "memapsin 2"
 FT sig_peptide 1..63
 FT /*tag= b
 FT mat_peptide 64..1503
 FT /*tag= c

XX MO2003039454-A2.

XX 15-MAY-2003.

XX 23-OCT-2002; 2002MO-US034324.

XX 23-OCT-2001; 2001US-0335952P.

XX 27-NOV-2001; 2001US-0333545P.

XX 14-JAN-2002; 2002US-0348464P.

XX 14-JAN-2002; 2002US-0348615P.

XX 20-JUN-2002; 2002US-0390804P.

XX 19-JUL-2002; 2002US-0397557P.

XX 19-JUL-2002; 2002US-0397619P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX (UNIV ILLINOIS) UNIV ILLINOIS FOUND.

XX Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J;

XX Turner RT;

XX MPI; 2003-541410/51.

XX P-PSDB; ABR61928.

XX New peptide compounds are memapsin beta secretase inhibitors used for

XX treating Alzheimer's disease.

```

PS Claim 101, Fig 8; 407pp; English
XX
CC The invention relates to peptide compounds of specified formula. The
CC compounds exhibit memapsin 2-beta secretase inhibitory activity relative
CC to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid
CC protein. The compounds can be used for treating Alzheimer's disease. The
CC present sequence represents a human memapsin 2 protein encoding DNA
CC (Genbank Index (GI):21040369)
XX
SQ Sequence 1506 BP, 306 A; 449 C; 431 G; 320 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ACC84849 ..
Alignment segment 1/1: (++)
Matching length: 104.00 Score: 35.9
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyTlleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGCACTCCGGCTGCCCCCTCGCAGCGGCTCGGGGGGCGCCCC 113
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
Sequence name: rmgp2ndb:ADL18183
Sequence documentation:
ID ADL18183 standard; CDNA; 1506 BP.
XX
AC ADL18183;
DT 06-MAY-2004 (first entry)
XX
DE Human APP beta-secretase encoding cDNA SEQ ID NO:103.
XX
KW chimeric protein; signal protein; trafficking signal targeting;
KW proteolytic cleavage site; protease; protease inhibitor; enzyme; human;
KW APP beta-secretase; gene; ss.
XX
OS Homo sapiens.
XX
PN WO2003014381-A1.
XX
PD 20-FEB-2003.
XX
PF 08-AUG-2002; 2002WO-KR001515.
XX
PR 10-AUG-2001; 2001KR-00048123.
XX
PA (AHRA-) AHRAM BIOSYSTEMS INC.
XX
PI Hwang I, Kim DH, Lee YJ;
XX
DR WPI; 2003-256596/25.
XX
DR P-PSDB; ADL18184.
XX
PT New chimeric protein, useful for detecting protease inhibitors inside the
XX cell or tissue.
XX
PS Disclosure: SEQ ID NO 103; 214pp; English.
XX
CC The present invention describes a chimeric protein comprising at least
CC one signal protein that has a trafficking signal targeting to a
CC subcellular organelle and at least one proteolytic cleavage site for a
CC protease. The chimeric protein is constructed, so that: (a) the
CC trafficking signals of all the signal proteins are inactivated by linking

```

CC the proteolytic site or a signal masking protein through the proteolytic
CC site to the N-or C- termini of the signal proteins, and so the chimeric
CC protein is present in cytosol; (b) the trafficking signal of at least one
CC signal protein is activated when the proteolytic cleavage site is cleaved
CC by the protease, and as a result at least one fragment protein that
CC includes the activated signal protein is transported to a subcellular
CC organelle; and (c) the chimeric protein is labelled with at least one
CC fluorescent protein and the position and intensity distribution of the
CC fluorescent label signal in the cell is altered depending on the cleavage
CC by the protease. Also described: (1) a recombinant gene comprising a
CC nucleic acid sequence encoding the chimeric protein which is constructed
CC to express the chimeric protein in a cell; (2) a cell transformed with
CC the recombinant gene or vector; (3) analysing the activity of a protease
CC *in vivo*; (4) screening protease inhibitors *in vivo*; (5) a system for
CC detecting a protease inside a cell; (6) a nucleic acid comprising the
CC sequence encoding the chimeric protein for detecting protease activity in
CC a cell; (7) a vector comprising the nucleic acid; (8) a kit for detecting
CC a protease inside a cell comprising the chimeric protein or the vector;
CC (9) detecting a protease inside a cell or tissue; and (10) detecting a
CC protease inhibitor *in vivo*. The chimeric protein is useful for detecting
CC protease inhibitors inside the cell or tissue. The present sequence
CC encodes a human APP beta-secretase, which is used in the exemplification
CC of the present invention.

SQ Sequence 1506 BP; 306 A; 449 C; 431 G; 320 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADL18183 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Bscore:	35.9
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22	ThGHlHIGlYllEArGLeUProLeuARgSerGlYleuglYglAlA	Pr 38
64	ACCACACACGCGCATCCGGCTGCCCTGTGCAGCGCGCTGGGGGCGCCCC	113
38	oLauGlyLeu	41
114	CCTGGGGGCTG	123

Sequence name: rnp2ndb:ADQ82259

Sequence documentation:
ID ADQ82259 standard; cDNA, 1524 BP.
XX
XX AC ADQ82259;
XX
DT 21-OCT-2004 (first entry)
XX
DE Human BACE1 coding sequence.
XX
XX transgenic animal; beta-site amyloid precursor protein cleaving enzyme;
KW BACE1; Hemostatic; Neuroprotective; Nootropic; Beta-secretase inhibitor;
KW amyloid beta; neurodegenerative disease; Alzheimer's disease;
KW cerebral amyloid angiopathy; Lewy body dementia; Down's syndrome;
KW hereditary cerebral hemorrhage; amyloidosis; Guam Parkinson-Dementia; ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
PM WO2004062627-A2.
PD
XX 29-JUL-2004.
XX
PF 13-JAN-2004; 2004MO-USO00883.
XX
PR 13-JAN-2003; 2003US-0439633P.

XX (REGC) UNIV CALIFORNIA.
 XX
 XX Masliah E, Rockenstein E;
 XX
 XX WPI, 2004-544036/52.
 XX
 XX New non-human transgenic animal overexpressing the (human) beta-site
 PT amyloid precursor protein cleaving enzyme (BACE1), useful as a model for
 PT conditions such as Alzheimer's disease, and in screening for therapeutic
 PT agents.

PS Example 1; SEQ ID NO 1; 54pp; English.

XX The present invention relates to a transgenic non-human animal for
 CC overexpressing beta-site amyloid precursor protein cleaving enzyme
 CC (BACE1) comprising cells containing a DNA transgene encoding for BACE1.
 CC The transgenic non-human animal is useful as a disease model, in studying
 CC the in vivo and in vitro regulation and effects of BACE1 in specific
 CC tissue types, in examining the role of BACE1 proteins in the accumulation
 CC of amyloid beta, and for developing therapies for amyloid beta-related
 CC conditions. The method, agents or compositions are useful for treating
 CC neurodegenerative disease, e.g. Alzheimer's disease, cerebral amyloid
 CC angiopathy, Lewy body dementia, Down's syndrome, hereditary cerebral
 CC hemorrhage with amyloidosis (Dutch type), or Guam Parkinson-Dementia
 CC complex. The present sequence represents human BACE1 coding sequence.

XX Sequence 1524 BP; 309 A; 456 C; 437 G; 322 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADQ82259 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	35.9
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
76 ACCGACGACGCGATCCGCTGCCCTGCCACGCGGCTGGGGGCGCCCC 125
|||||
38 oleuGlyLeu 41
|||||
126 CTTGGGGGCTG 135

```

Sequence name: rmgp2ndb:ABA02406

Sequence documentation:

ID ABA02406 standard; cDNA; 1527 BP.

XX ABA02406;

XX 26-FEB-2002 (first entry)

XX FLAG-tagged human beta-secretase encoding cDNA.

XX Human; beta-secretase; FLAG tag; inhibitor; amine compound;
 KW beta amyloid protein production; head injury; spinal injury;
 KW amyloid precursor protein alpha secretion; nerve damage;
 KW meningitis sequelae; cerebral paralysis; memory disorder; mental disease;
 KW neurotropic; neuroprotective; cerebroprotective; ss.

XX Homo sapiens.
 OS Synthetic.

XX Key Location/Qualifiers
 FT CDS 1..1527
 FT /tag= a
 FT /partial

/product= "FLAG-tagged human beta-secretase"
 /note= "No stop codon given in the specification"

WO200187293-A1.

22-NOV-2001.

18-MAY-2001; 2001WO-0P04144.

19-MAY-2000; 2000JP-00152758.

(TAKE) TAKEDA CHEM IND LTD.

PI Miyamoto M, Matsui J, Fukumoto H, Tarui N;

DR WPI; 2002-055640/07.

DR P-PSDB; AAM52697.

PT Beta-secretase inhibitor used for treating e.g. Alzheimer's disease and
 PT injury to brain or spine, and neurodegeneration, comprises amine
 PT compound.

PS Example; Page 78-79; 86pp; Japanese.

XX The invention relates to novel amine compounds which are beta-secretase
 CC inhibitors. The beta-secretase compounds also have the ability to promote
 CC amyloid precursor protein alpha secretion and to inhibit beta amyloid
 CC protein production. The beta-secretase inhibitors of the invention can be
 CC used for treating head or spinal injury, nerve damage, sequelae of
 CC meningitis, cerebral paralysis, memory disorders and mental diseases. The
 CC present sequence represents cDNA encoding a FLAG-tagged human beta-
 CC secretase used in the exemplifications of the invention

XX Sequence 1527 BP; 315 A; 451 C; 438 G; 323 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABA02406 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	35.9
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCCACGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGGCTG 123

```

Sequence name: rmgp2ndb:ADJ71857

Sequence documentation:

ID ADJ71857 standard; cDNA; 1527 BP.

XX ADJ71857;

XX 06-MAY-2004 (first entry)

XX Human cDNA SEQ ID NO: 6.

XX N-Substituted aryl carbamate; neuroprotective; neurotropic; neuroleptic;
 KW muscular; antiparkinsonian; cerebroprotective; vasotropic; haemostatic;
 KW antiarteriosclerotic; antidepressant; neurodegeneration; nerve damage;
 KW memory disorders; psychiatric disease; myopathy;
 KW mild cognitive impairment; Alzheimer's disease; ss; gene; human.

OS Homo sapiens.

XX Key Location/Qualifiers
FH CDS 1..1527
FT /*tag= a
XX WO2004014843-A1.
XX 19-FEB-2004.
XX PD 07-AUG-2003; 2003WO-JP010045.
XX PF 09-AUG-2002; 2002JP-00233231.
XX PR (TAKE) TAKEDA CHEM IND LTD.
XX PA Uchikawa O, Aso K, Koike T, Tarui N, Hirai K;
XX WPI; 2004-238691/22.
XX DR P-PSDB; ADJ71858.
XX PT New/known aryl carboxamide derivatives as inhibitors of aspartic acid
XX PT protease and beta secretase for treating Alzheimer's disease,
XX PT neurodegeneration, nerve damage, memory disorders, psychiatric disease,
XX PT myopathy and cognitive impairment.
XX PS Example 1; SEQ ID NO 6; 90pp; Japanese.
XX CC The invention relates to novel N-Substituted aryl carboxamide compounds
XX CC (1) and their salts. A compound of the invention has neuroprotective,
XX CC neurotropic, neuroleptic, muscular-gen., antiparkinsonian,
XX CC cerebroprotective, vasotropic, haemostatic, antiarteriosclerotic, and
XX CC antidepressant activity. The compounds are used to prevent and treat
XX CC neurodegeneration, nerve damage, memory disorders, psychiatric disease,
XX CC myopathy, mild cognitive impairment, or Alzheimer's disease, including
XX CC Down's syndrome, senile dementia, Parkinson's disease, Creutzfeldt-Jacob
XX CC disease, amyotrophic lateral sclerosis, diabetic neuropathy, Huntington's
XX CC chorea, multiple sclerosis, cerebrovascular disorders, cerebral embolism,
XX CC cerebral haemorrhage, cerebral arteriosclerosis, head injuries, spinal
XX CC injuries, post-encephalitic disease, cerebral palsy, depression, panic
XX CC disorder and schizophrenia. The present sequence is used in the
XX CC exemplification of the invention.
XX SQ Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;
XX Alignment of: us-10-726-967a-1 x ADJ71857 ..
XX Alignment segment 1/1: (+)
XX Matching Length: 104.00
XX Matching Percent Similarity: 100.00
XX Total Length: 20
XX Total Percent Identity: 100.00
XX Gaps: 0
XX Alignment:
XX 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
XX |||||||
XX 64 ACCGACGACGGGATCGGCTGCCCTGAGAAAGTGTGGGGGGGCCCC 113
XX |||||||
XX 38 OleuGlyLeu 41
XX |||||||
XX 114 CCTGGGGGCTG 123
XX Sequence name: rmp2ndb:ADP74534
XX Sequence documentation:
XX ID ADP74534 standard; CDNA; 1527 BP.
XX AC ADP74534;
XX DT 12-AUG-2004 (first entry)
XX

DE Human indole compound-related beta-secretase cDNA.
XX indole; neuroprotective; nootropic; antiparkinsonian; myopathy;
XX neuropathy; memory defect; senile dementia; amnesia; mental illness;
XX neurodegenerative disease; Alzheimer's; Creutzfeldt Jacob; CJD;
XX amyotrophic lateral sclerosis; Parkinson's; beta-secretase; ss; gene;
XX human.
XX OS Homo sapiens.
XX FH Key Location/Qualifiers
XX FT CDS 1..1527
XX FT /*tag= a
XX FT /product= "Human indole compound-related beta-secretase
XX FT protein"
XX JP2004149429-A.
XX PD 27-MAY-2004.
XX PF 29-OCT-2002; 2002JP-00314580.
XX PR 29-OCT-2002; 2002JP-00314580.
XX XX (TAKE) TAKEDA CHEM IND LTD.
XX PA WPI; 2004-405630/38.
XX DR P-PSDB; ADP74535.
XX PT Novel indole compound useful for treating senile dementia, Alzheimer's
XX PT disease, Creutzfeldt-Jacob disease, amyotrophic lateral sclerosis,
XX PT Parkinson's disease, neuropathy, senile dementia, amnesia or myopathy.
XX PS Example 119; SEQ ID NO 6; 67pp; Japanese.
XX XX The invention relates to a novel indole compound. The compound of the
XX CC invention demonstrates neuroprotective, nootropic and antiparkinsonian
XX CC activities and may be useful as a preventive or therapeutic agent of
XX CC myopathy, neuropathy, defects of memory e.g. senile dementia or amnesia,
XX CC mental illness and neurodegenerative disease, including Alzheimer's
XX CC disease, Creutzfeldt Jacob disease, amyotrophic lateral sclerosis or
XX CC Parkinson's disease. The peptide of the invention may be useful for
XX CC measuring the beta-secretase inhibitory activity of a test compound. The
XX CC current sequence is that of the human indole compound-related beta-
XX CC secretase cDNA of the invention.
XX SQ Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;
XX Alignment of: us-10-726-967a-1 x ADP74534 ..
XX Alignment segment 1/1: (+)
XX Matching Length: 104.00
XX Matching Percent Similarity: 100.00
XX Total Length: 20
XX Total Percent Identity: 100.00
XX Gaps: 0
XX Alignment:
XX 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
XX |||||||
XX 64 ACCGACGACGGGATCGGCTGCCCTGAGAAAGTGTGGGGGGGCCCC 113
XX |||||||
XX 38 OleuGlyLeu 41
XX |||||||
XX 114 CCTGGGGGCTG 123
XX Sequence name: rmp2ndb:ADH34044
XX Sequence documentation:
XX ID ADH34044 standard; CDNA; 1542 BP.
XX

AC ADH34044;
 XX
 DT 11-MAR-2004 (first entry)
 XX
 DE Human cDNA for His-tagged BACE (Beta-secretase).
 XX
 KW Beta-secretase; BACE; BACE-2; inhibitor; Alzheimer's disease;
 KW neuroprotective; nocrotic; amyloid precursor protein;
 KW beta-amyloid peptide; cerebrovascular amyloidosis; ss; gene.
 XX
 OS Synthetic.
 OS Homo sapiens.
 XX
 PN US2003125257-A1.
 XX
 PD 03-JUL-2003.
 XX
 PF 18-DEC-2002; 2002US-00322684.
 XX
 PR 20-DEC-2001; 2001EP-00130282.
 XX
 PA (BROC/) BROCKHAUS M.
 PA (DOEB/) DOEBEL H.
 PA (GRUE/) GRUENINGER F.
 PA (HUGU/) HUGENIN P.
 PA (KITA/) KITAS E A.
 PA (NELB/) NEUBOCK-HOCHSTETTER P.
 XX
 PI Brockhaus M, Doebel H, Grueninger F, Hugenin P, Kitas EA;
 PI Neubock-Hochstetter P;
 XX
 DR MPI; 2004-08811/09.
 XX
 PT New inhibitors of beta-secretase, useful for treating cerebrovascular
 PT amyloidosis, especially Alzheimer's disease, and for drug screening.
 XX
 PS Example 1; SEQ ID NO 1; 23pp; English.
 XX
 CC The invention relates to peptide beta-secretase (bs) inhibitors of
 CC generic formula appearing as ADH34057. Also included are an assay for
 CC identifying inhibitors of bs, screening compounds for inhibition of bs
 CC activity, a kit for identifying a bs inhibitor and bs inhibitors
 CC identified using the kit. The bs used is isolated or recombinant, and
 CC purified, especially a full-length bs, specifically BACE or BACE-2. The
 CC inhibitors of beta-secretase (which is involved in degradation of amyloid
 CC precursor protein to beta-amyloid peptide) are used for treating patients
 CC with, or predisposed to, cerebrovascular amyloidosis, specifically
 CC Alzheimer's disease. They are also used to prepare tagged derivatives,
 CC useful in screening compounds for identifying other bs inhibitors and for
 CC radiolabeling or positron emission tomographic imaging. The present
 CC sequence encodes a His-tagged BACE protein used to produce BACE
 CC protein recombinantly.
 XX
 SQ Sequence 1542 BP; 322 A; 459 C; 433 G; 328 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADH34044 ..
 Alignment segment 1/1: (+)
 Matching length: 104.00
 Matching Percent Similarity: 100.00
 Total Percent Similarity: 100.00
 Gaps: 0
 Total Percent Identity: 100.00
 Alignment:
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 79 ACCGACGACGCGATCCGACTGCGACGCGAGGAGTGGAGTGCACC 128
 38 OleuGlyLeu
 41

129 TCTGGGACTG 138
 Sequence name: rngp2ndb:AAA15663
 Sequence documentation:
 ID AAA15663 standard; cDNA; 1977 BP.
 XX
 AC AAA15663;
 XX
 DT 03-AUG-2000 (first entry)
 XX
 DE Human aspartyl protease 2 (b) (Asp2) nucleotide sequence.
 XX
 KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
 KW Alzheimer's disease; beta secretase site; ss.
 XX
 OS Homo sapiens.
 OS
 PN WO200017369-A2.
 XX
 PD 30-MAR-2000.
 XX
 PF 23-SEP-1999; 99WO-US020881.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 XX
 PA (PHAM) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 PI P-PSDB; AAY88426.
 XX
 DR MPI; 2000-303209/26.
 XX
 PT New enzyme designated human aspartase useful in research into Alzheimer's
 PT disease is capable of cleaving amyloid protein precursor at the beta
 PT secretase site to produce amyloid beta peptide.
 XX
 PS Claim 8; Fig 3; 183pp; English.
 XX
 CC This sequence represents the human aspartyl protease 2 (Asp2) nucleotide
 CC sequence. The invention relates to a protease (e.g. Asp2) capable of
 CC cleaving the beta secretase site of amyloid precursor protein (APP). The
 CC protease contains a sequence encoding the amino acid sequence DTG and a
 CC sequence encoding DSG or DTG separated by 100-300 amino acids. When
 CC mutated the APP gene causes an autosomal dominant form of Alzheimer's
 CC disease. APP localises to the cell surface membrane and have a single C-
 CC terminal transmembrane domain. Proteolytic processing of APP produces the
 CC amyloid beta protein, which is possibly very important in Alzheimer's
 CC disease. The invention includes a nucleotide sequence encoding the
 CC protease, a vector containing the nucleotide sequence, and a cell line
 CC comprising the vector. Methods for screening for inhibitors of beta
 CC secretase activity are also given in the invention. The human aspartase
 CC protein and nucleotide sequences and the methods for identifying
 CC inhibitors of the protease, are useful in the treatment of and research
 CC in to Alzheimer's disease
 XX
 SQ Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAA15663 ..
 Alignment segment 1/1: (+)
 Matching length: 104.00
 Matching Percent Similarity: 100.00
 Total Percent Similarity: 100.00
 Gaps: 0
 Total Percent Identity: 100.00
 Alignment:
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCGACGACGCGATCCGCTGCCCTTGGCGACGCGGCTGGGGGGGCGCCC 113

38 olenglylen 41
 |||||
 114 CCTGGGCGCTG 123

Sequence name: rngp2ndb:AA511703

Sequence documentation:

ID AA511703 standard; DNA, 1977 BP.

AC AA511703;

DT 24-OCT-2001 (first entry)

XX DNA encoding human aspartyl protease 2b (Asp-2b).

XX Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

XX beta-secretase; Alzheimer's disease; ds.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431

FT sig_peptide 1..63

FT misc_feature 64..135

FT misc_feature 136..171

FT mat_peptide 172..1427

FT /note= "Mature Aspartyl protease-2b"

XX W0200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI: 2001-502548/55.

XX P-PsDB: AAU07203.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

XX protease 2, lacking Asp2 transmembrane domain and retaining beta

XX secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Claim 98; Fig 2; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a

XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the

XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide

CC for assaying for modulators of beta-secretase activity; identifying

CC agents that inhibit the APP processing activity of human Asp2 aspartyl

CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2

CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.

CC Agents identified by the above methods are useful for treating

CC Alzheimer's disease; and for identifying modulators of amyloid-beta

CC (Abeta) peptide production, for use in designing therapeutics for the

CC treatment or prevention of Alzheimer's disease. Probes and primers

CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp

CC nucleic acids in in vitro assays and in Northern and Southern blots. The

CC present sequence represents the coding sequence of human Asp-2b used in

CC the methods of the invention

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AA511703 ..

XX Alignment segment 1/1: (+)

XX Matching length: 104.00

XX Matching Percent Similarity: 100.00

XX Total Percent Similarity: 100.00

XX Gaps: 0

XX Alignment:

XX 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

XX 64 ACCGACGACGCGATCGGCTGCCCTCGCGACGCGCGCTGGGGGCGGCC 113

XX 38 olenglylen 41

XX |||||

XX 114 CCTGGGCGCTG 123

XX Sequence name: rngp2ndb:AD17866

XX Sequence documentation:

XX ID AD17866 standard; cDNA; 1977 BP.

XX AC AD17866;

XX DT 10-DEC-2001 (first entry)

XX DE Human aspartyl protease 2(b) [hu-Asp2(b)] cDNA.

XX Human; aspartyl protease 2(b); Asp2(b); amyloid precursor protein; APP;

XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

XX amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;

XX chromosome 11q23.3-24.1; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1431

CC for assaying for modulators of beta-secretase activity; identifying

CC agents that inhibit the APP processing activity of human Asp2 aspartyl

CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2

CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.

CC Agents identified by the above methods are useful for treating

CC Alzheimer's disease; and for identifying modulators of amyloid-beta

CC (Abeta) peptide production, for use in designing therapeutics for the

CC treatment or prevention of Alzheimer's disease. Probes and primers

CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp

CC nucleic acids in in vitro assays and in Northern and Southern blots. The

CC present sequence represents the coding sequence of human Asp-2b used in

CC the methods of the invention

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AA511703 ..

XX Alignment segment 1/1: (+)

XX Matching length: 104.00

XX Matching Percent Similarity: 100.00

XX Total Percent Similarity: 100.00

XX Gaps: 0

XX Alignment:

XX 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

XX 64 ACCGACGACGCGATCGGCTGCCCTCGCGACGCGCGCTGGGGGCGGCC 113

XX 38 olenglylen 41

XX |||||

XX 114 CCTGGGCGCTG 123

XX Sequence name: rngp2ndb:AD17866

XX Sequence documentation:

XX ID AD17866 standard; cDNA; 1977 BP.

XX AC AD17866;

XX DT 10-DEC-2001 (first entry)

XX DE Human aspartyl protease 2(b) [hu-Asp2(b)] cDNA.

XX Human; aspartyl protease 2(b); Asp2(b); amyloid precursor protein; APP;

XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

XX amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;

XX chromosome 11q23.3-24.1; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1431

PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHMA) PHARMACIA & UPJOHN CO.
XX
PI Bienkowski MJ, Gurney M;
XX WPI; 2001-444208/48.
DR P-PSDB; AAE10630.
XX
PT Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
PS Example 2; Fig 3; 187bp; English.
XX
CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
CC short form of human Asp2 protein, designated as Asp2(b). Asp2 gene is
CC localised on chromosome 11q23.3-24.1
XX
SQ Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD17866 ..
Alignment segment 1/1: (+)
Matching Quality: 104.00 Escore: 35.9
Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThnGlnHieGly11eArGleuProleuArGserGlyLeuGlyGlyAlaPr 38
64 ACCCAGCAGCGGATCCGGCTGGCCCTGGCCAGCGGCTGGGGGGGGCCCC 113
38 oleuGlyLeu 41
114 CCGTGGGGCTG 123
Sequence name: rngp2ndb: AAD13022
Sequence documentation:
ID AAD13022 standard; CDNA; 1977 BP.
XX
AC AAD13022;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human aspartyl protease 2b (hu-Asp2b) cDNA.
XX
KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
KW neuroprotective; antisense therapy; gene therapy;
KW chromosome 11q23.3-24.1; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers

FT CDS 1. .1431
FT /*tag= a
FT /product= "Human aspartyl protease 2b (Hu-Asp2b) "
FT sig_peptide 1. .63
FT /*tag= b
FT mat_peptide 64. .1428
FT /*tag= c
FT /product= "Mature human aspartyl protease 2b (Hu-Asp2b) "
XX
XX W0200150829-A2.
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX Bienkowski MJ, Gurney ME, Heinrichson RU, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX P-PSDB; AAE06860.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 98; Fig 3; 185bp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes human aspartyl protease 2 (Hu-Asp2), a
XX 'short' form designated as (Hu-Asp2b). Hu-Asp 2 gene is localised on
XX chromosome 11q23.3-24.1
XX
SQ Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD13022 ..
Alignment segment 1/1: (+)
Matching Quality: 104.00 Escore: 35.9
Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThnGlnHieGly11eArGleuProleuArGserGlyLeuGlyGlyAlaPr 38
64 ACCCAGCAGCGGATCCGGCTGGCCCTGGCCAGCGGCTGGGGGGGGCCCC 113
38 oleuGlyLeu 41

|||||
114 CTGGGGCTG

123

Sequence name: rngp2ndb:AAD06740

Sequence documentation:

ID AAD06740 standard; cDNA; 1977 BP.

AC AAD06740;

DT 10-AUG-2001 (first entry)

DE Human aspartyl protease 2b (Asp2b) cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
 KW Alzheimer's disease; antialzheimer's; aspartyl protease 2b; Asp 2b;
 XX beta-secretase; chromosome 11q23.3-24.1; ss.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1431

FT /tag= a /product= "Human aspartyl protease 2b"

FT sig_peptide 1..63

FT /tag= b 64..135

FT /tag= c /note= "Pre-pro-peptide"

FT sig_peptide 136..171

FT /tag= d /note= "Pro-peptide"

FT mat_peptide 172..1428

FT /tag= e /product= "Human mature aspartyl protease 2b"

WO200123533-A2.

05-APR-2001.

22-SEP-2000; 2000WO-US026080.

23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney M, Bienkowski MJ;

XX WPI; 2001-290516/30.

DR P-PSDB; AAE02582.

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Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06740 ..

Alignment segment 1/1: (+)

Quality: 104.00
 Matching length: 20
 Matching Percent Similarity: 100.00
 Total Percent Similarity: 100.00
 Gaps: 0
 Total length: 35.9
 Matching Identity: 20
 Total Percent Identity: 100.00

Alignment:

22 ThrGlnHSGlyTLeaXgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCGACGACGCGATCGGCTGCCCTCGCGACGCGCGCGCGCGCC 113
 38 OlenGlyLeu 41
 114 CTGGGGCTG 123

Sequence name: rngp2ndb:AAS11518

Sequence documentation:

ID AAS11518 standard; cDNA; 1977 BP.

AC AAS11518;

DT 24-OCT-2001 (first entry)

DE Human cDNA encoding Aspartyl protease 2 (b), Asp2 (b).

XX Human; Aspartyl protease; Asp2 (b); beta-secretase; neotropic;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; ss.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1431

FT /tag= a /product= "Asp2 (b)"

FT sig_peptide 1..63

FT /tag= b 64..135

FT /tag= c /label= Pre_pro_peptide

FT sig_peptide 136..171

FT /tag= d /label= Pro_peptide

FT mat_peptide 172..1503

FT /tag= e /label= Mature_Asp2 (b)

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XX Claim 96; Fig 3; 185bp; English.
PS
XX
CC The invention relates to a purified polypeptide comprising a fragment of
CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
CC transmembrane domain and the Asp2 protein, and where the polypeptide and
CC the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. The invention also details polynucleotides for the Asp proteins
CC and vectors expressing them, and a polypeptide (isoform of amyloid
CC protein precursor (APP)) comprising the amino acid sequence of an APP or
CC its fragment containing an APP cleavage site recognizable by a mammalian
CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (Abeta) peptide production. APP is also useful in designing
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
CC associated with increased levels of Abeta processing is useful in assays
CC relating the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting Hu-Asp nucleic acids in *in vitro* assays and in Northern and
CC Southern blots. The present sequence encodes human Asp2(b)
XX
SQ Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ABL1518 ..
Alignment segment 1/1: (+)
Matching length: 20 Total length: 35.9
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGCTGCCCTCGCGCAGCGGCTGGGGGGCGCCCC 113
38 OLeuGlyLeu 41
114 CCTGGGGGCTG 123
Sequence name: rmp2ndb:ABL49915
Sequence documentation:
ID ABL49915 standard; DNA; 1977 BP.
XX
AC ABL49915;
XX
DT 31-MAY-2002 (first entry)
XX
DE Human aspartyl protease nucleotide sequence SEQ ID NO:3.
XX
KM Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;
KM aspartyl protease; neuroprotective; nootropic; beta-secretase inhibitor;
KM Alzheimer's disease; gene; de.
XX
OS Homo sapiens.
XX
PN WO200206306-A2.
XX
PD 24-JAN-2002.
XX
PF 19-JUL-2001; 2001WO-US023035.
XX
PR 19-JUL-2000; 2000US-0219795P.

PR 12-MAR-2001; 2001US-0275251P.
XX
XX
PA (PRMA) PHARMACIA & UPJOHN CO.
XX
PI Yan R, Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ,
PI Heinrichson RL;
XX
DR WPI; 2002-216995/27.
DR P-PSDB; ABB06410.
XX
PT Novel substrates for human aspartyl protease useful for identifying
PT modulators of beta secretase activity of aspartyl protease for treating
PT Alzheimer's disease.
XX
PS Claim 1; Page 119-120; 188bp; English.
XX
CC The present invention describes an isolated peptide (I) comprising a
CC sequence of at least four amino acids, where the peptide is a substrate
CC for conducting aspartyl protease assays. (I) has neuroprotective and
CC nootropic activities, and can be used as an inhibitor of beta-secretase
CC activity. A beta-secretase modulator from the present invention can be
CC used for inhibiting beta-secretase activity *in vivo*, and in the
CC manufacture of a medicament for the treatment of Alzheimer's disease.
CC Pharmaceutical compositions from the present invention can be used for
CC treating a disease or condition characterized by an abnormal beta-
CC secretase activity. (I) is useful for identifying agents that modulate
CC the activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as
CC a core structure to construct derivatives. ABL49914 to ABL49925 and
CC ABB06409 to ABB06593 represent sequences used in the exemplification of
CC the present invention
XX
SQ Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ABL49915 ..
Alignment segment 1/1: (+)
Matching length: 20 Total length: 35.9
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGCTGCCCTCGCGCAGCGGCTGGGGGGCGCCCC 113
38 OLeuGlyLeu 41
114 CCTGGGGGCTG 123
Sequence name: rmp2ndb:ABL52458
Sequence documentation:
ID ABL52458 standard; CDNA; 1977 BP.
XX
AC ABL52458;
XX
DT 16-JUL-2002 (first entry)
XX
DE Human Asp-2(b) nucleotide sequence SEQ ID NO:5.
XX
KM Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;
KM proteolytic; chromosome 11q23.3-24.1; gene; de.
XX
OS Homo sapiens.
XX
XX
FH Key Location/Qualifiers
FT 1..1431
FT CDS /*tag= a
FT /product= "Asp-2(b) "

PT /note= "aspartyl protease"
XX GB367060-A.
XX 27-MAR-2002.
XX
XX 29-OCT-2001; 2001GB-00025934.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX 22-SEP-2000; 2000GB-00023315.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Bieńkowski MJ, Gurney M;
XX WPI: 2002-397167/43.
XX P-PSDB; ABB78591.
XX
XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
XX Example 2; Fig 3; 182pp; English.
XX
XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridizes under stringent conditions to the non
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III') comprising a sequence that
CC hybridizes under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC comprising (III) or (III') and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence encodes hu-Asp2(b) from the present invention
XX
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ABL52458 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching Length: 104.00
XX Matching Percent Similarity: 100.00
XX Total length: 20
XX Total Percent Identity: 100.00
XX
XX Gaps: 0
XX Total Percent Identity: 100.00
XX
XX Alignment:
XX 22 ThrGlnHtIGly11eargpeuproleuArgserGlyLeuGlyGlyAlaPr 38
XX |||||
XX 64 ACCGACGACGACATCCGCTCCCTCCGACAGCGGCTCGGGGGGCCCC 113
XX |||||
XX 38 OleuGlyLeu 41
XX |||||
XX 114 CCTGGGGCTG 123

Sequence name: rngp2ndb:ADJ94317
Sequence documentation:
ID ADJ94317 standard; CDNA; 1977 BP.
XX
XX ADJ94317;
XX
XX 03-JUN-2004 (first entry)
XX
XX Human CDNA encoding aspartyl protease 2b, Asp-2b.
DE
XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
KW neurotropic; neuroprotective; amyloid beta.
XX
XX Homo sapiens.
XX
XX US6706485-B1.
XX
XX 16-MAR-2004.
XX
XX 12-APR-2000; 2000US-00548376.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bieńkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX WPI: 2004-236722/22.
XX P-PSDB; ADJ94318.
XX
XX Identifying agents that modulate activity of Asp2 aspartyl protease
PT useful for treating or preventing Alzheimer's disease involves comparing
PT APP processing activity of protease in presence and absence of test
PT agent.
XX
XX Claim 1; SEQ ID NO 5; 109pp; English.
XX
XX The invention relates to identifying agents that modulate activity of
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
CC precursor protein (APP) in the presence and absence of a test agent,
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence
CC of the test agent, and comparing the activities to identify agents that
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC for human Asp-1 and Asp-2(b), a vector comprising the
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
CC the vector and the method of producing Hu-Asp polypeptide, an isolated
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
CC cell that can be used to screen for inhibitors of beta secretase
CC activity, novel isoforms of amyloid protein precursor (APP), where the
CC laet 2 carboxy terminus amino acids of that isoform are both lysine
CC residues (e.g. those designated APP695-KK or carrying the Swedish
CC mutation where KM at 595-596 is mutated to NV, designated e.g. APP695-Sw
CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
CC for assaying for beta secretase activity and screening for inhibitors of
CC beta-secretase) and polynucleotides that encode the APP proteins. The
CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing, are useful for treating or preventing
CC Alzheimer's disease. The present sequence encodes an aspartyl protease of
CC the invention.
XX
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
XX

Alignment of: us-10-726-967a-1 x AD050413 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	35.9
Percent Similarity:	100.00	Percent Identity:
20	100.00	20
Total Percent Similarity:	100.00	Total Percent Identity:
0	100.00	100.00

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGCGCTGCCCTCGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rngp2ndb:AD050413

Sequence documentation:

ID AD050413 standard; cDNA; 1977 BP.

AC ADO50413;

DT 29-JUL-2004 (first entry)

DE Human aspartyl protease (Asp)-2(b) cDNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1;
KW ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431

FT /*tag= b

FT /product= "Human Asp-2 protein"

FT sig_peptide 1..63

FT /*tag= a

FT mat_peptide 64..1428

FT /*tag= c

FT /product= "Human mature Asp-2 protein"

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99US-0155493P.

XX 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heintzson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

XX P-PSDB; AD050414.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

XX involved in processing amyloid precursor protein into amyloid beta,

XX useful in preparing a composition for treating or preventing Alzheimer's

XX disease.

XX Claim 1; SEQ ID NO 5; 108bp; English.

CC The invention relates to a method for identifying an agent that decreases

CC the protease activity of the aspartyl protease (Asp) polypeptide. It also

CC provides enzyme and enzymatic procedures for cleaving the beta secretase

CC cleavage site of the amyloid precursor protein (APP). The invention is

CC useful in preparing a composition for treating or preventing Alzheimer's

CC disease. It is also useful in gene therapy. The present sequence is human

CC Asp-2 cDNA. Human Asp-2 gene is located at chromosome 11q23.3-24.1. This

CC sequence is used to illustrate the method of the invention.

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050413 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	35.9
Percent Similarity:	100.00	Percent Identity:
20	100.00	20
Total Percent Similarity:	100.00	Total Percent Identity:
0	100.00	100.00

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGCATCCGCGCTGCCCTCGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCGGGGGCTG 123
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Sequence name: rngp2ndb:ADR75326

Sequence documentation:

ID ADR75326 standard; cDNA; 1977 BP.

AC ADR75326;

DT 18-NOV-2004 (first entry)

DE Human aspartyl protease (Asp)-2(b) cDNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KW chromosome identification; Alzheimer's disease; human; gene; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431

FT /*tag= b

FT /product= "Human Asp-2 protein"

FT sig_peptide 1..63

FT /*tag= a

FT mat_peptide 64..1428

FT /*tag= c

FT /product= "Human mature Asp-2 protein"

XX US2004166507-A1.

XX 26-AUG-2004.

XX 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWSKI M J.

XX (HEIN/) HEINTZSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI, 2004-624916/60.
XX P-PSDB; ADR75327.
XX Novel purified/isolated polynucleotide encoding polypeptide having
XX aspartyl protease activity involved in processing amyloid precursor
XX protein into amyloid beta, useful in identifying agent decreasing
XX activity of aspartyl protease.
XX Claim 1; SEQ ID NO 5; 107bp; English.
XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridize with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying candidates to modulate the progression of
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX present sequence is the human Asp-2(b) cDNA. This sequence is used to
XX illustrate the method of the invention.
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADR75326 ..
Alignment segment 1/1: (+)
Matching Length: 104.00 Score: 35.9
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGATCCGGCTGCCCTGCCAGCGGCTGGGGGGCCCC 113
38 OLeuGlyLeu 41
114 CTTGGGGCTG 123
Sequence name: rnp2ndb:AAA15662
Sequence documentation:
ID AAA15662 standard; cDNA; 2070 BP.
XX AAA15662;
XX 03-AUG-2000 (first entry)
XX Human aspartyl protease 2 (a) (Asp2) nucleotide sequence.
XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
XX Alzheimer's disease; beta secretase site; ss.
XX Homo sapiens.
XX WO200017369-A2.
XX 30-MAR-2000.
XX 23-SEP-1999; 99MO-US020881.
XX 24-SEP-1998; 98US-0101594P.
XX

PA (PHAA) PHARMACIA & UPJOHN CO.
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI, 2000-303209/26.
XX P-PSDB; AAY88425.
XX New enzyme designated human aspartase useful in research into Alzheimer's
XX disease is capable of cleaving amyloid protein precursor at the beta
XX secretase site to produce amyloid beta peptide.
XX Claim 5; Fig 2; 183bp; English.
XX This sequence represents the human aspartyl protease 2 (Asp2) nucleotide
XX sequence. The invention relates to a protease (e.g. Asp2) capable of
XX cleaving the beta secretase site of amyloid precursor protein (APP). The
XX protease contains a sequence encoding the amino acid sequence DTG and a
XX sequence encoding DSG or DTG separated by 100-300 amino acids. When
XX mutated the APP gene causes an autosomal dominant form of Alzheimer's
XX disease. APP localises to the cell surface membrane and have a single C-
XX terminal transmembrane domain. Proteolytic processing of APP produces the
XX amyloid beta protein, which is possibly very important in Alzheimer's
XX disease. The invention includes a nucleotide sequence encoding the
XX protease, a vector containing the nucleotide sequence, and a cell line
XX comprising the vector. Methods for screening for inhibitors of beta
XX secretase activity are also given in the invention. The human aspartase
XX protein and nucleotide sequences and the methods for identifying
XX inhibitors of the protease, are useful in the treatment of and research
XX in to Alzheimer's disease
XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAA15662 ..
Alignment segment 1/1: (+)
Matching Length: 104.00 Score: 35.9
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGATCCGGCTGCCCTGCCAGCGGCTGGGGGGCCCC 113
38 OLeuGlyLeu 41
114 CTTGGGGCTG 123
Sequence name: rnp2ndb:AA511702
Sequence documentation:
ID AA511702 standard; DNA; 2070 BP.
XX AA511702;
XX 24-OCT-2001 (first entry)
XX DNA encoding human aspartyl protease 2a (Asp-2a).
XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
XX aspartyl protease 2; Asp2; amyloid protein precursor; APP;
XX beta-secretase; Alzheimer's disease; ds.
XX Homo sapiens.
XX Location/Qualifiers
XX Key 1..1506
XX CDS /*tag= a
XX /product= "Aspartyl protease-2a (Asp-2a)"
XX

```
FT sig_peptide 1..63
FT /tag= b
FT misc_feature 64..135
FT /tag= c
FT /note= "Pre-propeptide"
FT misc_feature 136..171
FT /tag= d
FT /note= "Propeptide"
FT mat_peptide 172..1503
FT /tag= e
FT /note= "Mature Aspartyl protease-2a"
XX
XX WO200149097-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX (BIEN/) BIENKOWSKI M. J.
XX (GURNEY/) GURNEY M. E.
XX (HEINRIKSON/) HEINRIKSON R. L.
XX (PARODI/) PARODI L. A.
XX (VANR/) VAN R.
XX
XX Blankowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX MPI; 2001-502548/55.
XX P-PSDB; AAU07102.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 98; Fig 2; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (APP)
XX comprising the amino acid sequence of a APP or its fragment containing an
XX APP cleavage site recognizable by a mammalian beta-secretase, and further
XX comprising two lysine residues at the carboxyl terminus of the amino acid
XX sequence of the mammalian APP or APP fragment. The polypeptides are used
XX for assaying for modulators of beta-secretase activity, identifying
XX agents that inhibit the APP processing activity of human Asp2 aspartyl
XX protease (hu-Asp2); identifying agents that modulate the activity of Asp2
XX; and for reducing cellular production of amyloid beta (Abeta) from APP.
XX Agents identified by the above methods are useful for treating
XX Alzheimer's disease; and for identifying modulators of amyloid-beta
XX (Abeta) peptide production, for use in designing therapeutics for the
XX treatment or prevention of Alzheimer's disease. Probes and primers
XX derived from APP nucleic acid sequences are useful for detecting hu-Asp
XX nucleic acids in in vitro assays and in Northern and Southern blots. The
XX present sequence represents the coding sequence of human Asp-2a used in
XX the methods of the invention
XX
XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAS11702 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching length: 104.00 Bscore: 35.9
XX Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
XX Total Percent Similarity: 100.00 Total Percent Identity: 100.00
XX
XX Gaps: 0
XX
XX Alignment:
```

```
22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCCGGCTGCCCTGGCGAGCGGCTGGGGGCGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGCTG 123
|||||

Sequence name: rngp2ndb:AMD17865
Sequence documentation:
ID AAD17865 strandard; cDNA; 2070 BP.
XX
XX AAD17865;
XX
XX 10-DEC-2001 (first entry)
XX
XX Human aspartyl protease 2(a) [hu-Asp2(a)] cDNA.
XX
XX Human; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;
XX chromosome 11q23.3-24.1; ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 1..1506
XX /tag= a
XX /product= "Human aspartyl protease 2(a)"
XX
XX sig_peptide 1..63
XX /tag= b
XX /tag= c
XX /product= "Mature human aspartyl protease 2(a)"
XX
XX mat_peptide 64..1503
XX /tag= c
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US0200881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Blankowski MJ, Gurney M;
XX
XX MPI; 2001-444208/48.
XX P-PSDB; AAE10629.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 2; Fig 2; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
```

CC with the substrate under acidic conditions and determining the level of
CC hu-Ap2 proteolytic activity. The present sequence is a cDNA encoding
CC long form of human Asp2 protein, designated as Asp2(a). Asp2 gene is
CC localised on chromosome 11q23.3-24.1
XX
SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17865 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTCGCGACGCGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rngp2ndb: AAD13021

Sequence documentation:

ID AAD13021 standard; cDNA; 2070 BP.

XX AAD13021;

XX 23-OCT-2001 (first entry)

XX Human aspartyl protease 2a (Hu-Asp2a) cDNA.

XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KW neuroprotective; antisense therapy; gene therapy;
XX chromosome 11q23.3-24.1; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1506 /*tag= a

FT sig_peptide 1..63 /product= "Human aspartyl protease 2a (Hu-Asp2a)"

FT mat_peptide 64..1503 /*tag= b

FT /product= c

FT /product= "Mature human aspartyl protease 2a (Hu-Asp2a)"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

DR P-PSDB; AAE06859.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Claim 98; Fig 2; 185pp; English.

XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid

CC precursor protein (APP) isoforms and their corresponding DNA molecules.

CC Human aspartyl proteases can act as beta-secretase proteases useful for

CC treating Alzheimer's disease. APP isoforms are useful for identifying

CC modulators of amyloid-beta peptide production, for use in designing

CC therapeutics for the treatment and prevention of Alzheimer's disease,

CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis

CC and neuronal loss. APP isoforms are also used in methods for identifying

CC inhibitors and modulators of human Asp2 activity. The invention relates

CC to a method for identifying agents that modulate the activity of human

CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used

CC as a means to screen in cellular assays for the inhibitors of beta- and

CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in

CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-

CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.

CC The present cDNA sequence encodes human aspartyl protease 2 (Hu-Asp2), a

CC 'long' form designated as (Hu-Asp2a). Hu-Asp 2 gene is localised on

XX chromosome 11q23.3-24.1

XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13021 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTCGCGACGCGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rngp2ndb: AAD06739

Sequence documentation:

ID AAD06739 standard; cDNA; 2070 BP.

XX AAD06739;

XX 10-AUG-2001 (first entry)

XX Human aspartyl protease 2a (Asp2a) cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp 2a;
KW beta-secretase; chromosome 11q23.3-24.1; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1506 /*tag= a

FT sig_peptide 1..63 /product= "Human aspartyl protease 2a"

FT /*tag= b

FT

```

FT sig_peptide 64..135
FT /*tag= c
FT /note= "Pre-pro-peptide"
FT sig_peptide 136..171
FT /*tag= d
FT /note= "Pro-peptide"
FT mat_peptide 172..1503
FT /*tag= e
FT /product= "Human mature aspartyl protease 2a"
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHNA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-290516/30.
XX P-PSDB; AAE02581.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 2; Page 126-127; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human aspartyl protease
XX (APP) 2a cDNA. Asp 2a has beta-secretase protease activity. Asp2 gene is
XX located on chromosome 11q23.3-24.1
XX
XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06739 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Quality: 104.00
XX Matching length: 20
XX Matching Percent Similarity: 100.00
XX Matching Percent Identity: 100.00
XX Total length: 35.9
XX Total Percent Similarity: 100.00
XX Total Percent Identity: 100.00
XX Gaps: 0
XX
XX Alignment:
XX
XX 22 ThrGlnHSGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
XX |||||||||
XX 64 ACCCGACGACGGCATCCGGCTGCCCTGGCGACGGGCGGCGGCC 113
XX |||||||||
XX 38 OLeuGlyLeu 41
XX |||||||||
XX 114 CCGGGGGGCTG 123
XX
XX Sequence name: rngp2nrb:AA511517
XX
XX Sequence documentation:
XX ID AA511517 standard; cDNA; 2070 BP.
XX
XX AC AA511517;
XX
XX DT 24-OCT-2001 (first entry)
XX

```

```

DE Human cDNA encoding Aspartyl protease 2(a), Asp2(a).
XX
XX Human; Aspartyl protease; Asp2(a); beta-secretase; neurotropic;
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
XX amyloid-beta; Abeta; ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 1..1506
XX /*tag= a
XX /product= "Asp2(a)"
XX
XX sig_peptide 1..63
XX /*tag= b
XX
XX sig_peptide 64..135
XX /*tag= c
XX /label= Pre_pro_peptide
XX
XX sig_peptide 136..171
XX /*tag= d
XX /label= Pro_peptide
XX
XX mat_peptide 172..1503
XX /*tag= e
XX /label= Mature_Asp2(a)
XX
XX WO200149098-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502549/55.
XX F-PSDB; AAU06603.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 98; Fig 2; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp2) protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the APP proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP)) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-
XX beta (Abeta) peptide production. APP is also useful in designing
XX therapeutics for the treatment or prevention of Alzheimer's disease. APP
XX comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
XX associated with increased levels of Abeta processing is useful in assays
XX relating the Alzheimer's research. The expression vector is useful for
XX recombinantly expressing APP. Nucleic acids that hybridize to APP
XX oligonucleotides are useful as probes or primers. The probes are useful
XX for detecting Hu-App nucleic acids in in vitro assays and in Northern and
XX Southern blots. The present sequence encodes human Asp2(a)
XX

```

XX SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11517 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHISGlyTLeArgLeuProLeuArgSergLYLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
114 CCTGGGGGCTG
123

```

Sequence name: rngp2ndb:ABL49914

Sequence documentation:

ID ABL49914 standard; DNA; 2070 BP.

AC ABL49914;

DT 31-MAY-2002 (first entry)

DE Human aspartyl protease nucleotide sequence SEQ ID NO:1.

XX Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;

KM aspartyl protease; neuroprotective; nootropic; beta-secretase inhibitor;

XX Alzheimer's disease; gene; ds.

OS Homo sapiens.

PN W0200206306-A2.

PD 24-JAN-2002.

PF 19-JUL-2001; 2001WO-US023035.

PR 19-JUL-2000; 2000US-0219795P.

PR 12-MAR-2001; 2001US-0275251P.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Van R, Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ;

PI Heintzkeon RL;

DR WPI; 2002-216995/27.

DR P-PSDB; ABB06409.

PT Novel substrates for human aspartyl protease useful for identifying

PT modulators of beta secretase activity of aspartyl protease for treating

XX Alzheimer's disease.

PS Claim 1; Page 117; 188pp; English.

XX The present invention describes an isolated peptide (I) comprising a

CC the activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as

CC a core structure to construct derivatives. ABL49914 to ABL49925 and

CC ABB06409 to ABB06593 represent sequences used in the exemplification of

CC the present invention

XX SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL49914 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHISGlyTLeArgLeuProLeuArgSergLYLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
114 CCTGGGGGCTG
123

```

Sequence name: rngp2ndb:ABL52457

Sequence documentation:

ID ABL52457 standard; cDNA; 2070 BP.

AC ABL52457;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(a) nucleotide sequence SEQ ID NO:3.

XX Human Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;

KM proteolytic; chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

OS Homo sapiens.

PN GB2367060-A.

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Bienkowski MJ, Gurney M;

PI WPI; 2002-397167/43.

DR P-PSDB; ABB78590.

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl

PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 2; Fig 2; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC -coding strand complementary to a defined 1804 nucleotide sequence (see
 CC AB52446) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see AB578583)); (4) a vector (IV)
 CC comprising (III) or (III') and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes hu-Asp2(a) from the present invention

XX SQ Sequence 2070 BP, 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AB52457 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	35.9
Percent Similarity:	100.00	Total length:	20	
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Gaps:	0	Total Percent Identity:	100.00	

Alignment:

```

22  ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38
64  ACCCAGCAGCGCATCCGGCTGCCCTCGGCCACCGCGCGGGGGCCCC 113
38  olLeuGlyLeu
114 CCTGGGGCGCTG
123

```

Sequence name: rngp2ndb:ADJ94315

Sequence documentation:

ID ADJ94315 standard; cDNA; 2070 BP.

XX ADJ94315;

XX 03-JUN-2004 (first entry)

XX Human cDNA encoding aspartyl protease 2a, Asp-2a.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

KM nototropic; neuroprotective; amyloid beta.

XX Homo sapiens.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 XX (PHMA) PHARMACIA & UPJOHN CO.

XX Gunney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI, 2004-236722/22.

XX P-PSDB; ADJ94316.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

PT useful for treating or preventing Alzheimer's disease involves comparing

PT APP processing activity of protease in presence and absence of test

XX agent.

XX Example 2; SEQ ID NO 3; 109pp; English.

XX The invention relates to identifying agents that modulate activity of

XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

XX precursor protein (APP) in the presence and absence of a test agent,

XX where Asp2 is a recombinant polypeptide and processes APP into amyloid

XX beta, determining APP processing activity of Asp2 in presence and absence

XX of the test agent, and comparing the activities to identify agents that

XX modulate the activity of Asp2. Also disclosed are the cDNA and proteins

XX for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the

XX nucleic acid encoding hu-Asp2 protease sequence, a host cell comprising

XX the vector and the method of producing hu-Asp polypeptide, an isolated

XX antibody that specifically binds to hu-Asp polypeptides, identifying a

XX cell that can be used to screen for inhibitors of beta secretase

XX activity, novel isoforms of amyloid protein precursor (APP) where the

XX last 2 carboxy terminal amino acids of that isoform are both lysine

XX residues (e.g. those designated APP65-KK or carrying the Swedish

XX mutation where KM at 595-596 is mutated to NL, designated e.g. APP65-Sw

XX or APP65-Sw-KK, or a V to F mutation at 642, e.g. APP65-VF, all useful

XX for assaying for beta secretase activity and screening for inhibitors of

XX beta-secretase) and polynucleotides that encode the APP proteins. The

XX method is useful for identifying agents that modulate the activity

XX (amyloid precursor protein processing activity) of Asp2 aspartyl

XX protease. Preferably, the method is useful for identifying agents that

XX inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid

XX precursor protein processing, are useful for treating or preventing

XX Alzheimer's disease. The present sequence encodes an aspartyl protease of

XX the invention.

SQ Sequence 2070 BP, 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94315 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	35.9
Percent Similarity:	100.00	Total length:	20	
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Gaps:	0	Total Percent Identity:	100.00	

Alignment:

```

22  ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38
64  ACCCAGCAGCGCATCCGGCTGCCCTCGGCCACCGCGCGGGGGCCCC 113
38  olLeuGlyLeu
114 CCTGGGGCGCTG
123

```

Sequence name: rngp2ndb:AD050411

Sequence documentation:

ID AD050411 standard; cDNA; 2070 BP.

XX AD050411;

XX 29-JUL-2004 (first entry)
XX DE Human aspartyl protease (Asp-2(a) cDNA.
XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
XX Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1;
XX ss.
XX Homo sapiens.
XX OS
XX Key Location/Qualifiers
XX FH CDS 1..1506
XX FT /*tag= b
XX FT /product= "Human Asp-2 protein"
XX FT sig_peptide 1..63
XX FT /*tag= a
XX FT mat_peptide 64..1503
XX FT /*tag= c
XX FT /product= "Human mature Asp-2 protein"
XX OS
XX US6737510-B1.
XX PN
XX 18-MAY-2004.
XX PD
XX 12-APR-2000; 2000US-00548373.
XX PF
XX 24-SEP-1998; 98US-0101594P.
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99WO-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX XX
XX PA (PHAA) PHARMACIA & UPJOHN CO.
XX PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX DR WPI; 2004-387112/36.
XX DR P-PSDB; ADO50412.
XX XX
XX PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
XX PT involved in processing amyloid precursor protein into amyloid beta,
XX PT useful in preparing a composition for treating or preventing Alzheimer's
XX PT disease.
XX PS Example 2; SEQ ID NO 3; 108pp; English.
XX XX
XX CC The invention relates to a method for identifying an agent that decreases
XX CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX CC provides enzyme and enzymatic procedures for cleaving the beta secretase
XX CC cleavage site of the amyloid precursor protein (APP). The invention is
XX CC useful in preparing a composition for treating or preventing Alzheimer's
XX CC disease. It is also useful in gene therapy. The present sequence is human
XX CC Asp-2 cDNA. Human Asp-2 gene is located at chromosome 11q23.3-24.1. This
XX CC sequence is used to illustrate the method of the invention.
XX SQ Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADO50411 ..
Alignment segment 1/1: (+)
Quality: 104.00
Matching length: 20
Total length: 35.9
Matching Percent Similarity: 100.00
Matching Percent Identity: 100.00
Total Percent Similarity: 100.00
Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHISGlyIleArgLeuProLeuArgSergIyLeuGlyIYAlaR 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113

38 oLeuGlyIleu
114 CTTGGGCTG
Sequence name: rng2ndb:ADR75324
ID ADR75324 Standard; cDNA; 2070 BP.
AC ADR75324;
DT 18-NOV-2004 (first entry)
XX DE Human aspartyl protease (Asp-2(a) cDNA.
XX KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
XX KW chromosome identification; Alzheimer's disease; human; gene; ss.
XX OS
XX Homo sapiens.
XX Key Location/Qualifiers
XX FH CDS 1..1506
XX FT /*tag= b
XX FT /product= "Human Asp-2 protein"
XX FT sig_peptide 1..63
XX FT /*tag= a
XX FT mat_peptide 64..1503
XX FT /*tag= c
XX FT /product= "Human mature Asp-2 protein"
XX PN
XX US2004166507-A1.
XX PD
XX 26-AUG-2004.
XX PF
XX 29-AUG-2003; 2003US-00652045.
XX PR 24-SEP-1998; 98US-0101594P.
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 13-OCT-1999; 99US-00416901.
XX XX
XX PA (GURN/) GURNEY M E.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (HEIN/) HEINRICHSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX DR WPI; 2004-624916/60.
XX DR P-PSDB; ADR75325.
XX XX
XX PT Novel purified/isolated polynucleotide encoding polypeptide having
XX PT aspartyl protease activity involved in processing amyloid precursor
XX PT protein into amyloid beta, useful in identifying agent decreasing
XX PT activity of aspartyl protease.
XX PS Claim 1; SEQ ID NO 3; 107pp; English.
XX XX
XX CC The invention relates to nucleic acid sequences encoding aspartyl
XX CC protease (Asp) polypeptides having aspartyl protease activity involved in
XX CC processing amyloid precursor protein (APP) into amyloid beta. The
XX CC invention also relates to a method for identifying an agent that
XX CC decreases the protease activity of the Asp. Asp DNA is useful in
XX CC chromosome identification as they can hybridise with a specific location
XX CC on a human chromosome and in identifying the relationship between genes
XX CC and diseases (particular gene responsible for causing diseases). It is
XX CC also useful for identifying candidates to modulate the progression of
XX CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX CC present sequence is the human Asp-2(a) cDNA. This sequence is used to
XX CC illustrate the method of the invention.

XX Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;
SQ Alignment of: us-10-726-967a-1 x ADR75324 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLap 38
|||||
64 ACCGACGACGCGCATCCGCGCTGCGCGACGCGCCTGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rnsnp2ndb:AAAS9551

Sequence documentation:
ID AAAS9551 standard; DNA; 2348 BP.

AC AAAS9551;

DT 14-NOV-2000 (first entry)

DE DNA encoding a human beta-secretase enzyme.

KW Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;
KW amyloid plaque component; Alzheimer's disease; amyloidogenic disease;
KW inhibitor; ss.

OS Homo sapiens.

XX Key Location/Qualifiers
FH CDS 306..1811
FT /*tag= a
FT /product= "beta-secretase"

XX W0200047618-A2.

XX 17-AUG-2000.

PF 10-FEB-2000; 2000MO-US003819.

XX 10-FEB-1999; 99US-0119571P.
PR 15-JUN-1999; 99US-0139172P.

XX (ELAN-) ELAN PHARM INC.

PI Anderson JP, Bast G, Doane MT, Frigon N, John V, Power M;
PI Simha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;
DR WPI; 2000-533011/48.
P-Psdb; AAB07896.

PT Purified beta-secretase protein used in assays to discover inhibitors
PT which can be used for the treatment of amyloidogenic diseases e.g.
PT Alzheimer's disease.

XX Disclosure; Fig 1B; 121p; English.

XX The specification describes a beta-secretase enzyme. The enzyme cleaves
CC beta-amyloid precursor protein to produce beta-amyloid peptide. This
CC enzyme is therefore implicated in the production of amyloid plaque
CC components which accumulate in the brains of individuals afflicted with
CC Alzheimer's disease. Inhibitors of beta-secretase are administered to a

CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-
CC like pathology to test if they maintain or improve cognitive ability or
CC reduce the plaque burden. The compounds are used for the treatment of
CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence
CC encodes a human beta-secretase enzyme
XX

SQ Sequence 2348 BP; 489 A; 713 C; 661 G; 484 T; 0 U; 1 Other;

Alignment of: us-10-726-967a-1 x AAAS9551 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLap 38
|||||
369 ACCGACGACGCGCATCCGCGCTGCGCGACGCGCCTGGGGGCGCCCC 418
|||||
38 oLeuGlyLeu
|||||
419 CCGGGGCGCTG 428
```

Sequence name: rnsnp2ndb:AAV41696

Sequence documentation:
ID AAV41696 standard; cDNA; 2541 BP.

AC AAV41696;

DT 26-OCT-1998 (first entry)

DE Nucleotide sequence of human ASP2 (aspartic protease 2).

KW Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;
KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;
KW prohormone processing; ss.

OS Homo sapiens.

XX Key Location/Qualifiers
FH CDS 1..1506
FT /*tag= a
FT /product= "human ASP2"

XX EP855444-A2.

XX 29-JUL-1998.

PF 27-JAN-1998; 98EP-00300573.

XX 28-JAN-1997; 97GB-00001684.

PA (SMIK) SMITHKLINE BEECHAM PLC.
PA (SMIK) SMITHKLINE BEECHAM CORP.

PI Powell DJ, Smith TS, Chapman CG, Murphy K;

DR WPI; 1998-389809/34.
P-Psdb; AAW59807.

PT New nucleic acid encoding human aspartic protease 2 - used to treat,
PT prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone
PT processing.

PS Claim 2; Page 6-7; 26pp; English.

XX This is the nucleotide sequence of the human ASP2 (aspartic protease 2),

CC used in the method of the invention. Agonists and antagonists for ASP2
CC immunospecific antibodies are used to treat conditions requiring
CC increased or decreased activity or expression of ASP2 respectively. ASP2
CC is used to treat and diagnose e.g. Alzheimer's disease, cancer and
CC prohormone processing and ASP2 or a fragment can be used to induce an
CC immune response against the above conditions

XX Sequence 2541 BP; 598 A; 673 C; 675 G; 579 T; 0 U; 16 Other;

Alignment of: us-10-726-967a-1 x AAV41696 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	36
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGCGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnp2ndb:AAS82237

Sequence documentation:

ID AAS82237 standard; cDNA; 2907 BP.

XX AAS82237;

DT 13-FEB-2002 (first entry)

DE DNA encoding novel human diagnostic protein #18041.

KW Human; chromosome mapping; gene mapping; gene therapy; forensic;

KW food supplement; medical imaging; diagnostic; genetic disorder; ss.

OS Homo sapiens.

XX WO200175067-A2.

XX 11-OCT-2001.

PF 30-MAR-2001; 2001WO-US008631.

PR 31-MAR-2000; 2000US-00540217.

PR 23-AUG-2000; 2000US-00649167.

PA (HYSB-) HYSBQ INC.

PI Drmanac RT, Liu C, Tang YT;

DR WPI; 2001-639362/73.

DR P-PSDB; ABG18050.

PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnosis, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity.

PS Claim 1; SEQ ID NO 18041; 103bp; English.

CC The invention relates to isolated polynucleotide (I) and polypeptide (II)
CC sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
CC and in recombinant production of (II). The polynucleotides are also used
CC in diagnostics as expressed sequence tags for identifying expressed

CC genes. (I) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC useful for generating antibodies against it, detecting or quantitating a
CC polypeptide in tissue, as molecular weight markers and as a food
CC supplement. (II) and its binding partners are useful in medical imaging
CC of sites expressing (II). (I) and (II) are useful for treating disorders
CC involving aberrant protein expression or biological activity. The
CC polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic
CC coding sequences of the invention. Note: The sequence data for this
CC patent did not appear in the printed specification, but was obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences

XX Sequence 2907 BP; 623 A; 801 C; 811 G; 672 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS82237 ..

Alignment segment 1/1: (-)

Matching length:	104.00	Total length:	36
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
2844 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGCGCTGGGGGCGCCCC 2795
38 OLeuGlyLeu
|||||
2794 CCTGGGGGCTG 2785
```

Sequence name: rnp2ndb:AAS73798

Sequence documentation:

ID AAS73798 standard; cDNA; 2914 BP.

XX AAS73798;

DT 13-FEB-2002 (first entry)

DE DNA encoding novel human diagnostic protein #9602.

KW Human; chromosome mapping; gene mapping; gene therapy; forensic;

KW food supplement; medical imaging; diagnostic; genetic disorder; ss.

OS Homo sapiens.

XX WO200175067-A2.

XX 11-OCT-2001.

PF 30-MAR-2001; 2001WO-US008631.

PR 31-MAR-2000; 2000US-00540217.

PR 23-AUG-2000; 2000US-00649167.

PA (HYSB-) HYSBQ INC.

PI Drmanac RT, Liu C, Tang YT;

DR WPI; 2001-639362/73.

DR P-PSDB; ABG09611.

PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnosis, forensics, gene mapping, identification of mutations

PT responsible for genetic disorders or other traits and to assess
 PT biodiversity.

PS Claim 1, SEQ ID NO 9602; 103pp; English.

XX
 CC The invention relates to isolated polynucleotide (I) and polypeptide (II)
 CC sequences. (I) is useful as hybridization probes, polymerase chain
 CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
 CC and in recombinant production of (II). The polynucleotides are also used
 CC in diagnostics as expressed sequence tags for identifying expressed
 CC genes. (I) is useful in gene therapy techniques to restore normal
 CC activity of (II) or to treat disease states involving (II). (II) is
 CC useful for generating antibodies against it, detecting or quantitating a
 CC polypeptide in tissue, as molecular weight markers and as a food
 CC supplement. (II) and its binding partners are useful in medical imaging
 CC of sites expressing (II). (I) and (II) are useful for treating disorders
 CC involving aberrant protein expression or biological activity. The
 CC polypeptide and polynucleotide sequences have applications in
 CC diagnostics, forensics, gene mapping, identification of mutations
 CC responsible for genetic disorders or other traits to assess biodiversity
 CC and to produce other types of data and products dependent on DNA and
 CC amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic
 CC coding sequences of the invention. Note: The sequence data for this
 CC patent did not appear in the printed specification, but was obtained in
 CC electronic format directly from WIPO at
 CC ftp.wipo.int/pub/published_pct_sequences

XX SQ Sequence 2914 BP; 675 A; 814 C; 801 G; 624 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS73798 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Total length:	Score:
20	104.00	20	36
Matching Percent Similarity: 100.00		Matching Percent Identity: 100.00	
Total Percent Similarity: 100.00		Total Percent Identity: 100.00	
Gaps: 0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||||
64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCCTGGGGGGGCCCC 113
   |||||
38 OleuGlyLeu 41
   |||||
114 CTTGGGGCTG 123

```

Sequence name: rngp2ndb:AAF28101

Sequence documentation:
 ID AAF28101 standard; DNA; 3252 BP.

XX AAF28101;

XX 02-APR-2001 (first entry)

XX Memapsin 2 DNA.

XX Memapsin 2; catalytic; Alzheimer's; ds.

XX Homo sapiens.

XX WO200100663-A2.

XX 04-JAN-2001.

XX 27-JUN-2000; 2000MO-US017661.

XX 28-JUN-1999; 99US-0141363P.

XX 30-NOV-1999; 99US-0168060P.

XX 25-JAN-2000; 2000US-0177836P.

PR 27-JAN-2000; 2000US-0178366P.

PR 08-JUN-2000; 2000US-0210292P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX Tang JUN, Lin X, Koelsch G;

XX WPI; 2001-102885/11.

XX Purified recombinant catalytically active memapsin 2, used to screen

XX inhibitors of it, which are used to treat and prevent Alzheimer's

XX disease.

XX Example 1; Page 71-72; 86pp; English.

XX The present invention relates to a purified recombinant catalytically

XX active memapsin 2. The invention may be used for isolating inhibitors

XX which are used to treat or prevent Alzheimer's disease. The invention may

XX also be used to screen for individuals more genetically prone to develop

XX Alzheimer's disease

XX SQ Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;

Alignment of: us-10-726-967a-1 x AAF28101 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Total length:	Score:
20	104.00	20	36
Matching Percent Similarity: 100.00		Matching Percent Identity: 100.00	
Total Percent Similarity: 100.00		Total Percent Identity: 100.00	
Gaps: 0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||||
25 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCCTGGGGGGGCCCC 74
   |||||
38 OleuGlyLeu 41
   |||||
75 CTTGGGGCTG 84

```

Sequence name: rngp2ndb:AAF31848

Sequence documentation:
 ID AAF31848 standard; cDNA; 3252 BP.

XX AAF31848;

XX 12-APR-2001 (first entry)

XX Human memapsin 2 cDNA.

XX Human; memapsin 2; neurotrophic; neuroprotective; amyloid precursor protein;

XX APP; memapsin 2 inhibitor; Alzheimer's disease; ds.

XX Homo sapiens.

XX WO200100665-A2.

XX 04-JAN-2001.

XX 27-JUN-2000; 2000MO-US017742.

XX 28-JUN-1999; 99US-0141363P.

XX 30-NOV-1999; 99US-0168060P.

XX 25-JAN-2000; 2000US-0177836P.

XX 27-JAN-2000; 2000US-0178368P.

XX 08-JUN-2000; 2000US-0210292P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX (UNII) UNIV ILLINOIS FOUND.

XX
PI Tang JUN, Hong L, Ghosh AK;
XX
DR WPI; 2001-137933/14.
DR P-PSDB; AAB6572.
XX
XX Novel memapsin 2 inhibitors which bind to active site of memapsin 2
PT having 2 catalytic aspartic residues and substrate binding cleft, used to
PT treat Alzheimer's disease by blocking amyloid precursor protein cleavage.
XX
XX Example 1; Page 70-71; 86pp; English.
XX
CC The present sequence is given in a specification relating to an inhibitor
CC of catalytically active memapsin 2. The inhibitor binds to the memapsin 2
CC active site, which is defined by the presence of two catalytic aspartic
CC residues and a substrate binding cleft. The inhibitor is useful for the
CC treatment and diagnosis of Alzheimer's disease. It is useful in screens
CC for individuals with a genetic predisposition to Alzheimer's disease. The
CC inhibitor is useful as a reagent for specifically binding to memapsin 2
CC or memapsin 2 analogues and for aiding in memapsin 2 isolation.
CC purification and characterisation
CC
XX Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;
Alignment of: us-10-726-967a-1 x AAF31848 ..
Alignment segment 1/1: (+)
Matching length: 104.00 Total length: 36
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
25 ACCCAGCAGCGGCATCCGGCTGCCCTGCCAGCGGCGGCGCCCC 74
38 OLeuGlyLeu 41
75 CCTGGGGCTG 84
Sequence name: rmp2ndb:ABK91244
Sequence documentation:
ID ABK91244 standard; cDNA; 3252 BP.
XX
AC ABK91244;
XX
DT 15-NOV-2002 (first entry)
XX
DE Human cDNA encoding Memapsin 2.
XX
XX Human; ss; gene; memapsin 2; aspartic protease; beta secretase;
XX degenerative disease; Alzheimer's disease; amyloid precursor protein;
XX APP; neuroprotective; nontropic; inhibitor;
XX substrate side-chain preference.
XX
OS Homo sapiens.
XX
PN W0200253594-A2.
XX
PD 11-JUL-2002.
XX
PF 28-DEC-2001; 2001WO-US050826.
XX
PR 28-DEC-2000; 2000US-0258705P.
XX
PR 14-MAR-2001; 2001US-025756P.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
PA (UNITI) UNIV ILLINOIS FOUND.

XX
PI Tang JUN, Koelsch G, Ghosh AK;
XX
DR WPI; 2002-619088/66.
DR P-PSDB; ABG78372, ABG78374.
XX
XX New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's
PT disease.
PT
XX Disclosure; Fig 6; 74pp; English.
XX
XX The invention relates to an inhibitor of catalytically active memapsin 2
CC (an aspartic protease which can cleave at beta secretase sites), which
CC binds to the active site of memapsin 2 defined by the presence of two
CC catalytic aspartic residues and substrate binding cleft. Also included is
CC a method of determination of the substrate side-chain preference in
CC memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2
CC substrates with memapsin 2, and determining the sub-site preference of
CC memapsin 2 by determining relative initial hydrolysis rates of the
CC mixture of memapsin 2 substrates; or (b) preparing a combinatorial
CC library of memapsin 2 inhibitors containing a base sequence taken from
CC OM99-2 (Glu-Val-Asn-Leu-Ala-Glu-phe), probing the library of
CC inhibitors with memapsin 2 which binds to several inhibitors to generate
CC several bound memapsin 2, and detecting the bound memapsin 2 with an
CC antibody raised to memapsin 2 and an alkaline phosphatase conjugated
CC secondary antibody. The inhibitors may be used in the manufacture of a
CC medicament for the treatment of Alzheimer's disease since memapsin 2 may
CC be involved in the cleavage of amyloid precursor protein (APP), and for
CC determining the substrate side-chain preference in memapsin 2 sub-sites.
XX The present sequence encodes human memapsin 2
XX
SQ Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;
Alignment of: us-10-726-967a-1 x ABK91244 ..
Alignment segment 1/1: (+)
Matching length: 104.00 Total length: 36
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
25 ACCCAGCAGCGGCATCCGGCTGCCCTGCCAGCGGCGGCGCCCC 74
38 OLeuGlyLeu 41
75 CCTGGGGCTG 84
Sequence name: rmp2ndb:ABK8641
Sequence documentation:
ID ABK8641 standard; cDNA; 3252 BP.
XX
AC ABK8641;
XX
DT 07-OCT-2002 (first entry)
XX
DE cDNA encoding human memapsin 2.
XX
XX Human; memapsin 2; beta secretase; aspartic protease; APP;
XX beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;
XX neuroprotective; nontropic; expressed sequence tag; EST; gene; ss.
XX
OS Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 1..1467
XX FT /*tag= a

```

FT      /partial
FT      /product= "Memapsin 2"
FT      /note= "This sequence lacks a start codon"
XX
XX
XX      US2002049303-A1.
XX
XX      25-APR-2002.
XX
XX      28-FEB-2001; 2001US-00796264.
XX
XX      28-JUN-1999; 99US-0141363P.
XX      30-NOV-1999; 99US-0168060P.
XX      25-JAN-2000; 2000US-0177836P.
XX      27-JAN-2000; 2000US-0178368P.
XX      27-JUN-2000; 2000US-00604608.
XX
XX      (TANG/) TANG, J J N.
XX      (LINX/) LIN X.
XX      (KOE/) KOELSCH G.
XX      (HONG/) HONG L.
XX
XX      Tang JUN, Lin X, Koelsch G, Hong L,
XX      WPI; 2002-507280/54.
XX      P-PSDB; AAU99488.
XX
XX      New recombinant catalytically active memapsin 2, useful to screen for
XX      inhibitors of memapsin 2 which can be used to prevent and treat
XX      Alzheimer's disease.
XX
XX      Example 1; Page 20-21; 44pp; English.
XX
XX      The present invention relates to methods for the production of purified,
XX      recombinant catalytically active, memapsin 2 (beta secretase). Memapsin
XX      2, a member of the aspartic protease family, cleaves beta-amyloid
XX      precursor protein (A $\beta$ ) found in amyloid plaques. The recombinant
XX      memapsin 2 is useful for identifying inhibitors of memapsin 2 in the
XX      design of drugs for the treatment and/or prevention of Alzheimer's
XX      disease. The recombinant memapsin 2 can be used to immunize against
XX      Alzheimer's disease. The present sequence encodes human memapsin 2
XX
XX      Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;
XX
XX      Alignment of: us-10-726-967a-1 x ABK88641 ..
XX
XX      Alignment segment 1/1: (+)
XX
XX      Matching Length: 104.00      Total length: 36
XX      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
XX      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
XX
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      22  ThrGlnHieGlyIleArgLeuProleuArgSerGlyLeuGlyValAlaPr 38
XX      25  ACCCGAGCAGCGGATCGGCTGCTGCGCAGCGGCTGGGGGCGCC 74
XX      38  OLeuGlyLeu
XX      41  |||||
XX      75  CCTGGGCGCTG
XX      84
XX
XX      Sequence name: rngp2ndb:ABX11591
XX
XX      Sequence documentation:
XX      ID      ABX11591 standard; cDNA; 3252 BP.
XX
XX      AC      ABX11591;
XX
XX      DT      01-MAY-2003 (first entry)
XX
XX      DE      Human partial cDNA encoding memapsin 2.

```

```

XX
XX      Human; ss; memapsin 2, beta-secretase; beta-amyloid precursor protein;
XX      beta-amyloid peptide; Alzheimer's disease; neurotrophic; neuroprotective.
XX
XX      Homo sapiens.
XX
XX      Key      Location/Qualifiers
XX      CDS      1..1467
XX
XX      FT      /*tag= a
XX      FT      /product= "Memapsin 2"
XX      FT      /partial
XX      FT      /note= "No start codon shown"
XX
XX      PN      US2002164760-A1.
XX
XX      PD      07-NOV-2002.
XX
XX      PF      28-FEB-2001; 2001US-00795903.
XX
XX      PR      28-JUN-1999; 99US-0141363P.
XX      PR      30-NOV-1999; 99US-0168060P.
XX      PR      25-JAN-2000; 2000US-0177836P.
XX      PR      27-JAN-2000; 2000US-0178368P.
XX      PR      08-JUN-2000; 2000US-0210292P.
XX      PR      27-JUN-2000; 2000US-00604608.
XX
XX      PA      (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
XX      PI      Lin X, Koelsch G, Tang JUN;
XX
XX      DR      WPI; 2003-255218/25.
XX      DR      P-PSDB; ABG76101.
XX
XX      PT      New purified recombinant catalytically active memapsin 2 (beta-
XX      PT      secretase), useful for designing and screening of specific inhibitors for
XX      PT      the diagnosis, prevention and/or treatment of Alzheimer's disease.
XX
XX      PS      Example 1; Page 20-21; 44pp; English.
XX
XX      The invention relates to a purified recombinant catalytically active
XX      memapsin 2, a beta-secretase which produces the beta-amyloid peptide from
XX      the beta amyloid precursor protein. Also included are producing the above
XX      memapsin 2 (comprising refolding the recombinant memapsin 2 under
XX      conditions which dissociate and then slowly refold the enzyme into a
XX      catalytically active form), isolating inhibitors of cleavage by memapsin
XX      2 (comprising adding to one or more potential inhibitors of cleavage by memapsin
XX      2 and a substrate for memapsin 2 and screening for decreased cleavage of
XX      the substrate by the inhibitors), designing or obtaining inhibitors of
XX      the memapsin 2 (comprising modelling an inhibitor based on the
XX      crystallisation coordinates of memapsin 2 or the parameters given in the
XX      specification), a database comprising binding properties and chemical
XX      structures of compounds designed or screened by the method above and
XX      treating or preventing Alzheimer's disease (comprising administering to a
XX      patient an inhibitor of memapsin 2 which binds to the active site of the
XX      memapsin 2 defined by the presence of 2 catalytic aspartic residues and
XX      substrate binding cleft or immunising an individual with the above
XX      memapsin 2 to elicit an amount of antibodies to reduce the cleavage by
XX      endogenous memapsin 2). The memapsin 2 is useful in designing and
XX      screening of specific inhibitors for the diagnosis, prevention and/or
XX      treatment of Alzheimer's disease. The present sequence encodes memapsin 2
XX
XX      Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;
XX
XX      Alignment of: us-10-726-967a-1 x ABX11591 ..
XX
XX      Alignment segment 1/1: (+)
XX
XX      Matching Length: 104.00      Total length: 36
XX      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
XX      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
XX
XX      Gaps: 0

```


Sequence 5625 BP; 1457 A; 1447 C; 1359 G; 0 T; 1362 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP44631 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
510 ACCGAGCAGCGCAUCCGGCUGCCCGCGAGCGCCUGGGGGGCCCCC 559
|||||
38 OLeuGlyLeu
|||||
560 CCGGGGGCUG
|||||
569
```

Sequence name: rngp2ndb:ADP44630

Sequence documentation:

ID ADP44630 standard; mRNA; 5700 BP.

ADP44630;

26-AUG-2004 (first entry)

Human beta-site APP cleaving enzyme type 1 transcript variant C mRNA.

neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;
Huntington's; spinocerebellar ataxia type 1;
spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;
dentatorubral-pallidoluysian atrophy; DRPLA;
beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;
ASB2; memapsin2; ss; human; transcript variant C.

Homo sapiens.

WO2004047872-A2.

10-JUN-2004.

26-NOV-2003; 2003WO-US037650.

26-NOV-2002; 2002US-0429387P.

03-FEB-2003; 2003US-0444614P.

(MEDT) MEDTRONIC INC.

Kaemmerer WF;

WPI; 2004-441106/41.

New medical system comprising an intracranial access device, a mapping means, a small interfering RNA or vector encoding the RNA, and a delivery means, useful for treating a neurodegenerative disorder.

Claim 23; SEQ ID NO 20; 228pp; English.

The invention relates to a novel medical system for treating a neurodegenerative disorder comprising an intracranial access device, a mapping means for locating a predetermined location in the brain, a deliverable amount of a small interfering RNA (siRNA), or vector encoding the siRNA, and a delivery means. The system of the invention has applications related to the CNS and may be useful for treating a neurodegenerative disorder, such as Parkinson's disease, Alzheimer's disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3 (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA). The current sequence is that of the human beta-site APP (amyloid

CC precursor protein) cleaving enzyme type 1 (BACE1;ASB2;memapsin2)
CC transcript variant C mRNA of the invention.

Sequence 5700 BP; 1470 A; 1476 C; 1372 G; 0 T; 1382 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP44630 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
510 ACCGAGCAGCGCAUCCGGCUGCCCGCGAGCGCCUGGGGGGCCCCC 559
|||||
38 OLeuGlyLeu
|||||
560 CCGGGGGCUG
|||||
569
```

Sequence name: rngp2ndb:ABL39774

Sequence documentation:

ID ABL39774 standard; cDNA; 5757 BP.

ABL39774;

10-MAY-2002 (first entry)

Human NS cDNA sequence SEQ ID NO:84.

Human; cytostatic; osteopathic; gynaecological; neuroprotective;
antiheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV;
vasoregic; antiarteriosclerotic; antiinflammatory; dermatological;
anorectic; muscular; antifertility; cardiovascular; anticoagulant;
antifibrinolytic; hypotension; antiaesthetic; immunomodulator; cardiac;
anticonvulsant; antidiabetic; tranquilizer; antidepressant; neuroleptic;
gastrointestinal; virucide; antitumor; cerebroprotective; nootropic;
contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia;
endometriosis; degenerative disease; multiple sclerosis; poriasis;
rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma;
inflammation; skin disorder; obesity; muscular dystrophy; AIDS;
infertility; cardiovascular disease; coagulation disease; hypertension;
ischemia; asthma; immune disease; epilepsy; angina; neurodegeneration;
diabetes; anxiety; depression; schizophrenia; viral disease; stroke;
gastric ulcer; Alzheimer's disease; gene; ss.

Homo sapiens.

WO200206315-A2.

24-JAN-2002.

17-JUL-2001; 2001WO-IL000653.

18-JUL-2000; 2000IL-00137345.

15-DEC-2000; 2000IL-00140354.

(COMP-) COMPUGEN LTD.

Mintz L, Freilich S, Bernstein J, .

WPI; 2002-155037/20.

P-PSDB; ABB06120.

One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.

PS Claim 1; Page 124-126; 290pp; English.

XX ABL39691 to ABL39818 represent novel human nucleic acid sequences
CC encoding the proteins given in ABB06037 to ABB06164. The novel sequences
CC (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective,
CC antineumatic, antiarthritic, antiparastatic, ophthalmological, virocidic,
CC vasotropic, antiatherosclerotic, antiinflammatory, dermatological,
CC anorectic, muscular, anti-HIV, antifertility, cardiovascular, cardiant,
CC immunomodulator, anticonvulsant, antidiabetic, tranquilizer, antitumor,
CC antidepressant, gastroenteric, neuroleptic, cerebroprotective,
CC nocotropic and contraceptive activities. The NS can be used in vaccines,
CC gene therapy and antisense therapy. Nucleic acids, expression vectors and
CC antibodies from the present invention can be used for treating and
CC diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative
CC diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis,
CC cataracts, restenosis, atherosclerosis, inflammation, skin disorders,
CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular
CC disease, coagulation disease, ischaemia, hypertension, asthma, immune
CC disease, epilepsy, angina, neurodegeneration, diabetes, anxiety,
CC depression, schizophrenia, viral disease, gastric ulcers, stroke,
CC Alzheimer's disease and as a contraceptive

SQ Sequence 5757 BP; 1485 A; 1490 C; 1392 G; 1388 T; 0 U; 2 Other;

Alignment of: us-10-726-967a-1 x ABL39774 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	36
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaAPr 38
518 ACCGAGCAGCGGATCCGCTGCGCCGCGCAGCGGCTGGGGGCGCC 567
38 OLeuGlyLeu 41
568 CCTGGGGCGCTG 577

Sequence name: rmp2ndb:ADP44629

Sequence documentation:
ID ADP44629 standard; mRNA; 5757 BP.

XX ADP44629;
AC
XX
DT 26-AUG-2004 (first entry)
XX
XX
DE Human beta-site APP cleaving enzyme type 1 transcript variant B mRNA.
XX
XX neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;
KW Huntington's; spinocerebellar ataxia type 1;
KW spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;
KW dentatorubral-pallidoluysian atrophy; DRPLA;
KW beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;
KW ASP2; memapsin2; ss; human; transcript variant B.

XX Homo sapiens.
OS
XX
PN WO2004047872-A2.
XX
PD 10-JUN-2004.
XX
XX 26-NOV-2003; 2003WO-US037650.
PF 26-NOV-2002; 2002US-0429387P.
PR 03-FEB-2003; 2003US-0444614P.

XX (MEDT) MEDTRONIC INC.
PA
XX
XX Kaemmerer WF;
PI
XX
XX WPI; 2004-44106/41.
DR
XX
XX
PT New medical system comprising an intracranial access device, a mapping
PT means, a small interfering RNA or vector encoding the RNA, and a delivery
PT means, useful for treating a neurodegenerative disorder.
PT
XX
PS Claim 23; SEQ ID NO 19; 228pp; English.

XX The invention relates to a novel medical system for treating a
CC neurodegenerative disorder comprising an intracranial access device, a
CC mapping means for locating a predetermined location in the brain, a
CC delivery means for delivering a small interfering RNA (siRNA), or vector encoding
CC the siRNA, and a delivery means. The system of the invention has
CC applications related to the CNS and may be useful for treating a
CC neurodegenerative disorder, such as Parkinson's disease, Alzheimer's
CC disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3
CC (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA).
CC The current sequence is that of the human beta-site APP (amyloid
CC precursor protein) cleaving enzyme type 1 (BACE1, ASP2; memapsin2)
CC transcript variant B mRNA of the invention.

SQ Sequence 5757 BP; 1487 A; 1488 C; 1392 G; 0 T; 1390 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP44629 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	36
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaAPr 38
510 ACCGAGCAGCGGCAUCCGGCUGCCCGGCGCAGCGGCGGGGGCGCC 559
38 OLeuGlyLeu 41
560 CCGGGGGCGCUG 569

Sequence name: rmp2ndb:ADP44628

Sequence documentation:
ID ADP44628 standard; mRNA; 5832 BP.

XX ADP44628;
AC
XX
DT 26-AUG-2004 (first entry)
XX
XX
DE Human beta-site APP cleaving enzyme type 1 transcript variant A mRNA.
XX
XX neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;
KW Huntington's; spinocerebellar ataxia type 1;
KW spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;
KW dentatorubral-pallidoluysian atrophy; DRPLA;
KW beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;
KW ASP2; memapsin2; ss; human; transcript variant A.

XX Homo sapiens.
OS
XX
PN WO2004047872-A2.
XX
PD 10-JUN-2004.
XX
XX 26-NOV-2003; 2003WO-US037650.

XX	US2003224512-A1.	XX
XX	04-DEC-2003.	XX
XX	31-MAY-2002; 2002US-00159942.	XX
XX	31-MAY-2002; 2002US-00159942.	XX
XX	(ISIS-) ISIS PHARM INC.	XX
XX	Dobie KW;	XX
XX	WPI; 2004-051909/05.	XX
XX	P-PSDB; ADG86751.	XX
PT	New antisense compound targeted to a nucleic acid molecule encoding a	PT
PT	beta-site amyloid precursor protein (APP)-cleaving enzyme, useful for	PT
PT	treating diseases associated with beta-site APP-cleaving enzyme, e.g.	PT
XX	neurodegeneration.	XX
PS	Example 13; SEQ ID NO 4; 58pp; English.	PS
CC	The invention relates to a compound targeted to a nucleic acid molecule	CC
CC	encoding a beta-site amyloid precursor protein (APP)-cleaving enzyme. The	CC
CC	antisense oligonucleotides and compounds are useful for inhibiting the	CC
CC	expression of beta-site amyloid precursor protein (APP)-cleaving enzyme,	CC
CC	modulating amyloid deposition in neurons, altering the expression of a	CC
CC	splice variant of beta-site APP-cleaving enzyme, and for treating	CC
CC	diseases or conditions associated with expression of beta-site APP-	CC
CC	cleaving enzyme e.g. neurodegeneration or Alzheimer's disease. The	CC
CC	antisense compounds are also useful as research reagents and kits, or in	CC
CC	diagnostic, therapeutic and prophylaxis applications, e.g. to prevent or	CC
CC	delay infection, inflammation or tumour formation. The present sequence	CC
XX	represents a human APP-cleaving enzyme DNA.	XX
SO	Sequence 5878 BP; 1547 A; 1518 C; 1405 G; 1408 T; 0 U; 0 Other;	SO
XX	Alignment of: us-10-726-967a-1 x ADG86621 ..	XX
XX	Alignment segment 1/1: (+)	XX
XX	Quality: 104.00	XX
XX	Matching length: 20	XX
XX	Matching Percent Similarity: 100.00	XX
XX	Total Percent Similarity: 100.00	XX
XX	Gaps: 0	XX
XX	Score: 36	XX
XX	Total length: 20	XX
XX	Matching Percent Identity: 100.00	XX
XX	Total Percent Identity: 100.00	XX
XX	Alignment:	XX
XX	22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaAP 38	XX
XX	518 ACCCGACGACGGCATCCGGCTGCCCCCTGGCGACGGCTGGGGAGCGCCCC 567	XX
XX	38 oLeuGlyLeu	XX
XX		XX
XX	568 CCTGGGGCTTG	XX
XX		XX
XX	577	XX
XX	Sequence name: rmpg2ndb:ADQ17467	XX
XX	Sequence documentation:	XX
XX	ID ADQ17467 standard; DNA; 5878 BP.	XX
XX	AC ADQ17467;	XX
XX	DT 26-AUG-2004 (first entry)	XX
XX	Human soft tissue sarcoma-upregulated DNA - SEQ ID 284.	XX
XX	DE soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human,	XX
XX	de.	XX
XX	KW Homo sapiens.	XX

```

PN MO2004048938-A2.
PD 10-JUN-2004.
XX ..
XX 26-NOV-2003; 2003W0-US038193.
PF 26-NOV-2003; 2003W0-US038193.
XX
XX 26-NOV-2002; 2002US-0429739P.
PR
XX (PROT-) PROTEIN DESIGN LABS INC.
PA
XX Aziz N, Gineburg WM, Zlotnik A;
XX
XX WPI; 2004-441208/41.
XX
XX Early detection of soft tissue sarcoma comprises determining expression
PT of a gene in a first soft tissue sample and a normal soft tissue sample
PT and comparing the gene expression, also useful in treating soft tissue
PT sarcoma.
XX
XX Example 2; SEQ ID NO 284; 210bp; English.
XX
XX The invention relates to a novel method for detecting soft tissue sarcoma
CC which comprises obtaining a first soft tissue sample from an individual
CC and a normal soft tissue sample from the same or different individual,
CC determining the expression of a gene in both samples and comparing the
CC expression of the gene in both soft tissue samples, where a higher level
CC of protein expression in the first soft tissue sample indicates the
CC presence of soft tissue sarcoma. The method of the invention has
CC cyrostatic applications and may be useful for detecting soft tissue
CC sarcoma, possibly via gene therapy or vaccine production. The nucleic
CC acid sequences may be useful in diagnostic and screening applications.
CC The current sequence is that of a human soft tissue sarcoma-upregulated
CC DNA of the invention. The current sequence is not shown within the
CC specification per se but was submitted in CD format by the inventor.
XX
XX Sequence 5878 BP; 1547 A; 1518 C; 1405 G; 1408 T; 0 U; 0 Other;
SQ
Alignment of: us-10-726-967a-1 x ADQ17467 ..
Alignment segment 1/1: (+)
Quality: 104.00 BaseScore: 36
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHicGlyTlleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
518 ACCCAAGACAGGCGATCCGCTGCCCTTGCACAGCGGCGCGGCGGCC 567
38 oLeuGlyLeu 41
568 CCTGGGGGCTCG 577
Sequence name: rmgp2ndb:AAA59553
Sequence documentation:
ID AAA59553 standard; DNA; 16080 BP.
XX
XX AAA59553;
XX AC
XX DT 14-NOV-2000 (first entry)
XX
XX DNA clone pCEK Cl.27 encoding a human beta-secretase enzyme.
XX
XX Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;
KW amyloid plaque component; Alzheimer's disease; amyloidogenic disease;
KM inhibitor; se.
XX
XX Homo sapiens.
DS

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XX  MO200047618-A2.
PN  17-AUG-2000.
XX  10-FEB-2000; 2000WO-US003819.
XX  10-FEB-1999; 99US-0119571P.
XX  15-JUN-1999; 99US-0139172P.
XX  (ELAN-) ELAN PHARM INC.
XX  Anderson JP, Baal G, Doane MT, Frigon N, John V, Power M;
PI  Sinha S, Tateo G, Tung J, Wang S, Mcconlogue L;
XX  WPI: 2000-533011/48.
XX  Purified beta-secretase protein used in assays to discover inhibitors
PT  which can be used for the treatment of amyloidogenic diseases e.g.
PT  Alzheimer's disease.
XX  Disclosure; Fig 13A-E; 121pp; English.
XX  The specification describes a beta-secretase enzyme. The enzyme cleaves
CC  beta-amyloid precursor protein to produce beta-amyloid peptide. This
CC  enzyme is therefore implicated in the production of amyloid plaque
CC  components which accumulate in the brains of individuals afflicted with
CC  Alzheimer's disease. Inhibitors of beta-secretase are administered to a
CC  mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-
CC  like pathology to test if they maintain or improve cognitive ability or
CC  reduce the plaque burden. The compounds are used for the treatment of
CC  amyloidogenic diseases e.g. Alzheimer's disease. The present sequence
CC  encodes a human beta-secretase enzyme
XX  SQ Sequence 16080 BP; 3627 A; 4556 C; 3962 G; 3913 T; 0 U; 22 Other;
Alignment of: us-10-726-967a-1 x AAA59553 ..
Alignment segment 1/1: (+)
Matching length: 104.00      Total length: 36.1
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrglnhiGly11eArGleuProLeuArGserGlyLeuGlyAlaPr 38
1738 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGGCGGCGCCCC 1787
38 OLeuGlyLeu
1788 CCTGGGGGCTG 41
1797
Sequence name: rmp2ndb:AAA28280
Sequence documentation:
ID AAA28280 standard; cDNA; 1503 BP.
XX  AAA28280;
AC  12-FEB-2001 (first entry)
XX  Rat cDNA encoding beta-secretase.
DE  Rat cDNA encoding beta-secretase.
XX  Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; rat;
XX  Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.
OS  Rattus sp.
XX  Key Location/Qualifiers
FH

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```

FT  CDS 1. 1503
FT  /tag= a
FT  /product= "Beta secretase"
FT  /note= "No stop codon given"
XX  MO200058479-A1.
XX  05-OCT-2000.
XX  23-MAR-2000; 2000WO-US007755.
XX  26-MAR-1999; 99US-00277229.
XX  (AMGE-) AMGEN INC.
XX  Citron M, Vassar RJ, Bennett BD;
XX  WPI: 2000-594643/56.
XX  P-PSDB; AAY94769.
XX  Isolated beta-secretase nucleic acids and encoded polypeptides, useful
PT  for diagnosis and gene therapy of Alzheimer's disease.
XX  Claim 1; Fig 3; 145pp; English.
XX  This invention relates to 3 nucleotide sequences encoding beta-secretase
CC  proteins. Beta-secretase is an enzyme involved in the production of one
CC  of the components of amyloid plaques involved in Alzheimer's disease. The
CC  invention includes an expression vector comprising the nucleotide
CC  sequence, a host cell comprising the expression vector, and a process for
CC  producing the protein through culturing the transformed cells. Also
CC  included in the invention are a polypeptide derivative of the beta-
CC  secretase protein, a fusion protein comprising beta-secretase fused to a
CC  heterologous amino acid sequence, and a method for modulating the levels
CC  of beta-secretase polypeptide in a mammal comprising administering the
CC  polynucleotide sequence. Beta-secretase exhibits neuroprotective and
CC  neurotrophic activity. The beta-secretase nucleotide sequence may be used to
CC  map locations of the beta-secretase gene and related genes on chromosomes
CC  and as hybridization probes in diagnostic assays to test for the presence
CC  of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's
CC  syndrome, and amyloid angiopathy. The nucleotide sequence may also be
CC  used as anti-sense inhibitors of beta-secretase expression, in gene
CC  therapy of Alzheimer's disease, and for the identification of compounds
CC  that modulate beta-secretase activity. Antibodies to the beta-secretase
CC  protein may be used for in vitro and in vivo diagnostic purposes to
CC  detect the presence of beta-secretase polypeptide in a body fluid or cell
CC  sample. The present sequence represents rat cDNA encoding beta-secretase
XX  SQ Sequence 1503 BP; 324 A; 428 C; 419 G; 332 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAA28280 ..
Alignment segment 1/1: (+)
Matching length: 77.00      Total length: 89.5
Matching Percent Similarity: 90.00      Matching Percent Identity: 80.00
Total Percent Similarity: 90.00      Total Percent Identity: 80.00
Gaps: 0
Alignment:
22 ThrglnhiGly11eArGleuProLeuArGserGlyLeuGlyAlaPr 38
64 ACCCATCTCGGTATCCGACTGCCCTTCGACGCGGCGCTGCGAGGCCACC 113
38 OLeuGlyLeu
114 CCGGGGCGCTG 41
123
Sequence name: rmp2ndb:AAA28279
Sequence documentation:
FH

```

ID	AAA28279 standard; cDNA; 1503 BP.	
XX	AAA28279;	
AC	12-FEB-2001 (first entry)	
XX	Murine cDNA encoding beta-secretase.	
DE	Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; mouse;	
KM	Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.	
XX	Mus sp.	
OS		
XX		
XX	Key	Location/Qualifiers
FT	CDS	1..1503
FT	/tag= a	
FT	/product= "Beta secretase"	
FT	/note= "No stop codon given"	
XX		
PN	W0200058479-A1.	
XX		
PD	05-OCT-2000.	
XX		
XX	23-MAR-2000; 2000MO-US007755.	
PF		
XX	26-MAR-1999; 99US-00277229.	
PR		
XX	(AMGE-) AMGEN INC.	
PA		
PI	Citron M, Vassar RJ, Bennett BD;	
XX		
DR	WPI; 2000-594643/56.	
XX	P-PSDB; AA194768.	
XX		
PT	Isolated beta-secretase nucleic acids and encoded polypeptides, useful	
PT	for diagnosis and gene therapy of Alzheimer's disease.	
XX		
PS	Claim 1; Fig 2; 145pp; English.	
XX		
CC	This invention relates to 3 nucleotide sequences encoding beta-secretase	
CC	proteins. Beta-secretase is an enzyme involved in the production of one	
CC	of the components of amyloid plaques involved in Alzheimer's disease. The	
CC	invention includes an expression vector comprising the nucleotide	
CC	sequence, a host cell comprising the expression vector, and a process for	
CC	producing the protein through culturing the transformed cells. Also	
CC	included in the invention are a polypeptide derivative of the beta-	
CC	secretase protein, a fusion protein comprising beta-secretase fused to a	
CC	heterologous amino acid sequence, and a method for modulating the levels	
CC	of beta-secretase polypeptide in a mammal comprising administering the	
CC	polynucleotide sequence. Beta-secretase exhibits neuroprotective and	
CC	neurotropic activity. The beta-secretase nucleotide sequence may be used	
CC	map locations of the beta-secretase gene and related genes on chromosomes	
CC	and as hybridization probes in diagnostic assays to test for the presence	
CC	of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's	
CC	syndrome, and amyloid angiopathy. The nucleotide sequence may also be	
CC	used as anti-sense inhibitors of beta-secretase expression, in gene	
CC	therapy of Alzheimer's disease, and for the identification of compounds	
CC	that modulate beta-secretase activity. Antibodies to the beta-secretase	
CC	protein may be used for in vitro and in vivo diagnostic purposes to	
CC	detect the presence of beta-secretase polypeptide in a body fluid or cell	
CC	sample. The present sequence represents murine cDNA encoding beta-	
CC	secretase	
XX		
XX		
SQ	Sequence 1503 BP; 315 A; 439 C; 426 G; 323 T; 0 U; 0 Other;	
	Alignment of: us-10-726-967a-1 x AAA28279 ..	
	Alignment segment 1/1: (+)	
	Quality: 77.00	Score: 89.5
	Matching length: 20	Total length: 20
	Matching Percent Similarity: 90.00	Matching Percent Identity: 80.00
	Total Percent Similarity: 90.00	Total Percent Identity: 80.00

```

Alignment:
Gaps: 0

22 ThrGlnHAGIYIleArgLeuProLeuArgSerGlyLeuGlyIYalaPr 38
|||:::|||||
64 ACCCATCTCTGGCATCGGCTGCCCTTTCGACGCGCCTGCGACGGGCAACC 113
|||
38 oLeuGlyIleu 41
|||
114 CCTGGGCGCTTG 123

Sequence name: rmgp2ndb:AAF83845

Sequence documentation:
ID AAF83845 standard; DNA; 1506 BP.
XX
XX AAF83845;
XX
XX
DT 06-AUG-2001 (first entry)
DE Mouse aspartic secretase-2 (mASP-2) encoding DNA.
XX
XX Aspartic secretase-2; mASP-2; Alzheimer's disease; cancer; nootropic;
KW neuroprotective; cytostatic; ds.
XX
XX Mus musculus.
XX
XX Key Location/Qualifiers
XX CDS 1..1506
XX /*tag= a
XX /product= "mASP-2"
XX
XX W0200136600-A1.
XX
XX PD 25-MAY-2001.
XX
XX PF 16-NOV-2000; 2000MO-US031583.
XX
XX PR 16-NOV-1999; 99US-0165800P.
XX PR 15-NOV-2000; 2000US-00713158.
XX
XX PA (SMIK ) SMITHKLINE BEECHAM CORP.
XX PA (SMIK ) SMITHKLINE BEECHAM PLC.
XX
XX PI Zhu Y, Li X, Powell DJ, Christie G;
XX
XX WP1: 2001-343813/36.
XX DR P-PSDB; AAB84948.
XX
XX New mouse aspartic secretase-2 polypeptide, useful for screening drugs
XX for the prevention and treatment of Alzheimer's disease and cancer.
XX
XX PS Claim 1; Page 23; 31pp; English.
XX
XX This DNA encodes a mouse aspartic secretase-2 (mASP-2) polypeptide. The
XX mASP-2 polypeptide can be expressed by standard recombinant methodology.
XX mASP-2 can be used to discover drugs for the prevention and treatment of
XX diseases including Alzheimer's, cancer, and prohormone processing
XX dyfunctions, particularly where knockout mice are used
XX
XX SQ Sequence 1506 BP; 316 A; 439 C; 427 G; 324 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAF83845 ..

Alignment segment 1/1: (+)

Quality: 77.00 EScore: 89.5
Matching length: 20 Total length: 20
Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00
Total Percent Similarity: 90.00 Total Percent Identity: 80.00
Gaps: 0

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Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGCTGGCAGGCCACCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rngp2ndb:AAA15664

Sequence documentation:

ID AAA15664 standard; DNA; 2043 BP.

AC AAA15664;

DT 03-AUG-2000 (first entry)

DE Murine aspartyl protease 2 (a) (Asp2) nucleotide sequence.

KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

KM Alzheimer's disease; beta secretase site; mouse; ss.

XX Mus musculus.

PN WO200017369-A2.

PD 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR MPI; 2000-303209/26.

PT P-PSDB; AAY88427.

PT New enzyme designated human aspartase useful in research into Alzheimer's disease is capable of cleaving amyloid protein precursor at the beta secretase site to produce amyloid beta peptide.

PS Example 3; Fig 4; 183pp; English.

XX This sequence represents the murine aspartyl protease 2 (Asp2) nucleotide sequence. The invention relates to a protease (e.g. Asp2) capable of cleaving the beta secretase site of amyloid precursor protein (APP). The protease contains a sequence encoding the amino acid sequence DTG and a sequence encoding DSG or DTG separated by 100-300 amino acids. When mutated the APP gene causes an autosomal dominant form of Alzheimer's disease. APP localises to the cell surface membrane and have a single C-terminal transmembrane domain. Proteolytic processing of APP produces the amyloid beta protein, which is possibly very important in Alzheimer's disease. The invention includes a nucleotide sequence encoding the protease, a vector containing the nucleotide sequence, and a cell line comprising the vector. Methods for screening for inhibitors of beta secretase activity are also given in the invention. The human aspartase protein and nucleotide sequences and the methods for identifying inhibitors of the protease, are useful in the treatment of and research in to Alzheimer's disease

SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15664 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	89.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00

Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACAGCGCTGGCAGGCCACCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rngp2ndb:AA511704

Sequence documentation:

ID AA511704 standard; DNA; 2043 BP.

AC AA511704;

DT 24-OCT-2001 (first entry)

DE DNA encoding mouse aspartyl protease 2a (Asp-2a).

KW Mouse; aspartyl protease 1; Asp-1; nontropic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KM beta-secretase; Alzheimer's disease; ds.

XX Mus sp.

XX Key

FH Location/Qualifiers

FT CDS

FT 1..1506

FT /*tag= a

FT /product= "Aspartyl protease-2a (Asp-2a)"

FT 1..63

FT /*tag= b

FT misc_feature

FT 64..135

FT /*tag= c

FT /note= "Pre-propeptide"

FT 136..171

FT /*tag= d

FT /note= "Propeptide"

FT 172..1503

FT /*tag= e

FT /note= "Mature Aspartyl protease-2a"

XX WO200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRICHSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX MPI; 2001-502548/55.

XX P-PSDB; AAU07204.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

XX protease 2, lacking Asp2 transmembrane domain and retaining beta

XX secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Claim 26; Fig 4; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a

CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Hu-Asp2
CC; and for reducing cellular production of amyloid beta (A-beta) from APP.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (A-beta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
CC nucleic acids in *in vitro* assays and in Northern and Southern blots. The
CC present sequence represents the coding sequence of mouse Asp-2a used in
CC the methods of the invention

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11704 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCATCTCGGCATCCGGCTGCCCTTGGCAGCGGCTGGCAGGGCCACC 113

38 oLeuGlyLeu 41
114 CTTGGGGCCTGG 123

Sequence name: rmgp2ndb.AAD17867

Sequence documentation:

ID AAD17867 standard; cDNA; 2043 BP.

XX AAD17867;

XX 10-DEC-2001 (first entry)

XX Murine aspartyl protease 2(a) [Asp2(a)] cDNA.

XX Murine aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;

KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;

KW ss.

XX Mus musculus.

XX OS

XX Key

XX FT CDS

XX GB235767-A.

XX PD 04-JUL-2001.

XX PF 22-SEP-2000; 2000GB-00023315.

XX PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.

XX (PMA) PHARMACIA & UPJOHN CO.

PI Bienkowiecki MJ, Gurney M;

XX WPI; 2001-444208/48.

DR P-PSDB; AAE10631.

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Example 3; Fig 4; 187pp; English.
The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
proteins which lack transmembrane domain or amino terminal domain or
cytoplasmic domain and retains alpha-secretase activity and amyloid
protein precursor (APP) processing activity. The proteins of the
invention are useful for assaying hu-Asp1 alpha-secretase activity, which
in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
activity, where modulators that increase hu-Asp1 alpha-secretase activity
are useful for treating Alzheimer's disease (AD) which causes progressive
dementia with consequent formation of amyloid plaques, neurofibrillary
tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
with the substrate under acidic conditions and determining the level of
hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
murine Asp2(a) protein

SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17867 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCATCTCGGCATCCGGCTGCCCTTGGCAGCGGCTGGCAGGGCCACC 113

38 oLeuGlyLeu 41
114 CTTGGGGCCTGG 123

Sequence name: rmgp2ndb.AAD13023

Sequence documentation:

ID AAD13023 standard; cDNA; 2043 BP.

XX AAD13023;

XX 23-OCT-2001 (first entry)

XX Murine aspartyl protease 2a (murine Asp2a) cDNA.

XX

XX

XX

XX

Mouse; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotrophic;
neuroprotective; antisense therapy; gene therapy; ss.

XX Mus musculus.

XX OS

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FH Key Location/Qualifiers
FT CDS 1..1506
FT /*tag= a
FT /product= "Murine aspartyl protease 2a"
PN WO200150829-A2.
PD 19-JUL-2001.
PF 09-MAY-2001; 2001WO-IB000799.
PR 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEINRICH/) HEINRICHSON R L.
XX (PARODI/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX P-PSDB; AAE06861.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 26; Fig 4; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX APP nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes murine aspartyl protease 2 (murine
XX Asp2), a 'long' form designated as (murine Asp2a) related to the
XX invention
XX
XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD13023 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching Quality: 77.00 Total length: 89.5
XX Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00
XX Total Percent Similarity: 90.00 Total Percent Identity: 80.00
XX Gaps: 0
XX
XX Alignment:
XX
XX 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
XX |||:::|||||
XX 64 ACCCATCTCGGCATCCGGCTGCCCTTGCACAGCGCTGGCAGGCGCACCC 113
XX |||:::|||||
XX 38 OLeuGlyLeu 41
XX |||:::|||||
XX 114 CTTGGGCGCTG 123
XX
XX Sequence name: rngp2ndb.AAD06741

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Sequence documentation:
ID AAD06741 Standard; cDNA, 2043 BP.
XX
XX AAD06741;
AC
XX 10-AUG-2001 (first entry)
DT
XX
XX Murine aspartyl protease 2a (Asp2a) cDNA.
DE
XX
XX Murine; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp 2a;
XX beta-secretase; ss.
XX
XX Mus musculus.
OS
XX
XX Key Location/Qualifiers
XX CDS 1..1506
XX /*tag= a
XX /product= "Murine aspartyl protease 2a"
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX WPI; 2001-290516/30.
XX P-PSDB; AAE02583.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 3; Fig 4; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is murine aspartyl protease
XX (Asp) 2a cDNA. Asp 2a has beta-secretase protease activity
XX
XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06741 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching Quality: 77.00 Total length: 89.5
XX Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00
XX Total Percent Similarity: 90.00 Total Percent Identity: 80.00
XX Gaps: 0
XX
XX Alignment:
XX
XX 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
XX |||:::|||||
XX 64 ACCCATCTCGGCATCCGGCTGCCCTTGCACAGCGCTGGCAGGCGCACCC 113
XX |||:::|||||
XX 38 OLeuGlyLeu 41
XX |||:::|||||
XX 114 CTTGGGCGCTG 123
XX
XX Sequence name: rngp2ndb.AAD06741

```

Sequence name: rngp2ndb:AA511519

Sequence documentation:

ID AA511519 standard; cDNA; 2043 BP.

AC AA511519;

DT 24-OCT-2001 (first entry)

DE Mouse cDNA encoding Aspartyl protease 2(a), Asp2(a).

XX Mouse: Aspartyl protease; Asp2(a); beta-secretase; neurotropic;

KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; ss.

OS Mus musculus.

XX Key Location/Qualifiers

FT CDS 1..1506

XX /tag= a

XX /product= "Asp2(a)"

XX MO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000798.

XX 09-MAY-2001; 2001MO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX BIENKOWSKI MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

XX P-PSDB; AAU06605.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Claim 26; Fig 4; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of

CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2

CC transmembrane domain and the Asp2 protein, and where the polypeptide and

CC the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. The invention also details polynucleotides for the Asp proteins

CC and vectors expressing them, and a polypeptide (isoform of amyloid

CC protein precursor (APP) comprising the amino acid sequence of an APP or

CC its fragment containing an APP cleavage site recognizable by a mammalian

CC beta-secretase, and further comprising two lysine residues at the

XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP

CC fragment. Also included in the invention are methods of identifying

CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are

CC useful for treating Alzheimer's disease. APP is useful in methods for

CC identifying inhibitors or modulators of human Asp2 activity and amyloid-

CC beta (Abeta) peptide production. APP is also useful in designing

CC therapeutic for the treatment or prevention of Alzheimer's disease. APP

CC comprising the APP-Sw-beta-secretase peptide sequence (NIDA), which is

CC associated with increased levels of Abeta processing is useful in assays

CC relating the Alzheimer's research. The expression vector is useful for

CC recombinantly expressing APP. Nucleic acids that hybridize to Asp

CC oligonucleotides are useful as probes or primers. The probes are useful

CC for detecting hu-Ap nucleic acids in in vitro assays and in Northern and

CC Southern blots. The present sequence encodes mouse Asp2(a)

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proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridizes under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see AB152456) where the nucleotide sequence encodes a polypeptide having Asp1 proteolytic activity and lacks nucleotides encoding a transmembrane domain; (3) a purified polynucleotide (III') comprising a sequence that hybridizes under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV) comprising (III) or (III') and (5) a host cell (V) transformed or transfected with (III), (III') and/or (IV). The hu-Asp1 protease substrate (I) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence encodes mouse Asp-2(a) from the present invention

Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52459 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGGCATCCGGCTGCCCCCTTCGCACGCGCTGGCAGGCCACC 113
38 oLeuGlyLeu
   |||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG
   |||::|||::|||::|||::|||::|||::|||::|||::|||
123

```

Sequence name: rmgp2ndb:ADJ94319

Sequence documentation:

ID ADJ94319 standard; cDNA; 2043 BP.

AC ADJ94319;

XX 03-JUN-2004 (first entry)

XX Mouse cDNA encoding aspartyl protease 2b, Asp-2b.

XX Mouse; 89; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; App; Alzheimer's disease;

KM nototropic; neuroprotective; amyloid beta.

OS Mus musculus.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0153493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2004-236722/22.

DR P-PSDB; ADJ94320.

XX

PT Identifying agents that modulate activity of Asp2 aspartyl protease

PT useful for treating or preventing Alzheimer's disease involves comparing

PT APP processing activity of protease in presence and absence of test

PT agent.

XX

PS

XX Example 3; SEQ ID NO 7; 109pp; English.

XX

CC The invention relates to identifying agents that modulate activity of

CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

CC precursor protein (APP) in the presence and absence of a test agent;

CC where Asp2 is a recombinant polypeptide and processes APP into amyloid

CC beta, determining APP processing activity of Asp2 in presence and absence

CC of the test agent, and comparing the activities to identify agents that

CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins

CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the

CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising

CC the vector and the method of producing Hu-Asp polypeptide, an isolated

CC antibody that specifically binds to Hu-Asp polypeptides, identifying a

CC cell that can be used to screen for inhibitors of beta secretase

CC activity, novel isoforms of amyloid protein precursor (APP), where the

CC last 2 carboxy terminus amino acids of that isoform are both lysine

CC residues (e.g. those designated APP695-KK or carrying the Swedish

CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW

CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful

CC for assaying for beta secretase activity and screening for inhibitors of

CC beta-secretase) and polynucleotides that encode the APP proteins. The

CC method is useful for identifying agents that modulate the activity

CC (amyloid precursor protein processing activity) of Asp2 aspartyl

CC protease. Preferably, the method is useful for identifying agents that

CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid

CC precursor protein processing, are useful for treating or preventing

CC Alzheimer's disease. The present sequence encodes an aspartyl protease of

CC

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGGCATCCGGCTGCCCCCTTCGACGCGCTGGCAGGCCACC 113
38 oLeuGlyLeu
   |||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG
   |||::|||::|||::|||::|||::|||::|||::|||::|||
123

```

Sequence name: rmgp2ndb:AD050415

Sequence documentation:

ID AD050415 standard; cDNA; 2043 BP.

AC AD050415;

XX 29-JUL-2004 (first entry)

XX Murine aspartyl protease (Asp)-2 cDNA.

XX

KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
 KM Alzheimer's disease; gene therapy; murine; gene; ss.
 OS Mus musculus.
 XX
 XX Key Location/Qualifiers
 FT CDS 1..1506
 FT /*tag= a
 FT /product= "Murine aspartyl protease (Asp) -2"
 PN US6737510-B1.
 XX 18-MAY-2004.
 XX
 XX 12-APR-2000; 2000US-00548373.
 XX
 XX 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WC-05020881.
 PR 13-OCT-1999; 99US-00416901.
 XX
 XX (PHAA) PHARMACIA & UPJOHN CO.
 PA Gurney ME, Bienkowski MJ, Heinriksen RL, Parodi LA, Yan R;
 PI WPI; 2004-387112/36.
 DR P-PSDB; ADO50416.
 XX
 XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
 PT involved in processing amyloid precursor protein into amyloid beta,
 PT useful in preparing a composition for treating or preventing Alzheimer's
 PT disease.
 XX
 XX Example 3; SEQ ID NO 7, 108pp; English.
 XX
 XX The invention relates to a method for identifying an agent that decreases
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase
 CC cleavage site of the amyloid precursor protein (APP). The invention is
 CC useful in preparing a composition for treating or preventing Alzheimer's
 CC disease. It is also useful in gene therapy. The present sequence is
 CC murine Asp-2 cDNA. This sequence is used to illustrate the method of the
 CC invention.
 XX
 XX SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADO50415 ..
 Alignment segment 1/1: (+)
 Matching Quality: 77.00
 Matching Length: 20
 Matching Percent Similarity: 90.00
 Total Percent Identity: 80.00
 Gaps: 0
 Total Length: 89.5
 Total Percent Identity: 80.00
 Alignment:
 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
 64 ACCCATCTCCGCGATCCGCTGCCCTCCGACGCGGCTGGCAGGCGCAC 113
 38 OleuGlyLeu 41
 114 CCTGGGCGCTG 123
 Sequence name: rmgp2ndb.ADR75328
 Sequence documentation:
 ID ADR75328 standard; cDNA; 2043 BP.
 XX ADR75328;

XX
 DT 18-NOV-2004 (first entry)
 XX
 DE Murine aspartyl protease (Asp) -2 cDNA.
 XX
 KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
 KM chromosome identification; Alzheimer's disease; murine; gene; ss.
 XX
 XX Mus musculus.
 XX
 XX Key Location/Qualifiers
 FT CDS 1..1506
 FT /*tag= a
 FT /product= "Murine aspartyl protease (Asp) -2"
 PN US2004166507-A1.
 XX 26-AUG-2004.
 XX
 XX 29-AUG-2003; 2003US-00652045.
 XX
 XX 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 13-OCT-1999; 99US-00416901.
 XX
 XX (GURNEY) GURNEY M E.
 PA (BIEN) BIENKOWSKI M J.
 PA (HEIN) HEINRIKSON R L.
 PA (PARO) PARODI L A.
 PA (YANR) YAN R.
 XX
 XX Gurney ME, Bienkowski MJ, Heinriksen RL, Parodi LA, Yan R;
 PI WPI; 2004-624916/60.
 DR P-PSDB; ADR75329.
 XX
 XX Novel purified/isolated polynucleotide encoding polypeptide having
 PT aspartyl protease activity involved in processing amyloid precursor
 PT protein into amyloid beta, useful in identifying agent decreasing
 PT activity of aspartyl protease.
 XX
 XX Example 3; SEQ ID NO 7, 107pp; English.
 XX
 XX The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (Asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that
 CC decreases the protease activity of the Asp. Asp DNA is useful in
 CC chromosome identification as they can hybridise with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assay for detecting hu-Asp polypeptide expression. The
 CC present sequence is the murine Asp-2 cDNA. This sequence is used to
 CC illustrate the method of the invention.
 XX
 XX SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADR75328 ..
 Alignment segment 1/1: (+)
 Matching Quality: 77.00
 Matching Length: 20
 Matching Percent Similarity: 90.00
 Total Percent Identity: 80.00
 Gaps: 0
 Total Length: 89.5
 Total Percent Identity: 80.00
 Alignment:
 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

```

||||:|||||
64 ACCAATCTGGGATCCGGCTGCCCCCTTCGACGGGCTGGCAGGGCCACC 113
38 OLeuGlyLeu 41
114 CCTGGGCTTG 123

```

Sequence name: rngp2ndb:ABK63758

Sequence documentation:

```

ID ABK63758 standard; cDNA; 2158 BP.
XX
AC ABK63758;
XX
DT 18-JUN-2002 (first entry)
XX
DE Rat sequence differentially expressed in response to a hepatotoxin #1665.
XX
KW Rat; ss; hepatotoxin; expressed sequence tag; EST; drug screening;
XX differential expression; centrilobular necrosis; steatosis.
XX
OS Rattus norvegicus.
XX
PN W0200210453-A2.
XX
PD 07-FEB-2002.
XX
PF 30-JUL-2001; 2001WO-US023872.
XX
PR 31-JUN-2000; 2000US-0222040P.
PR 02-NOV-2000; 2000US-0244880P.
PR 11-MAY-2001; 2001US-0290029P.
PR 15-MAY-2001; 2001US-0290645P.
PR 22-MAY-2001; 2001US-0292336P.
PR 06-JUN-2001; 2001US-0295788P.
PR 13-JUN-2001; 2001US-0287457P.
PR 19-JUN-2001; 2001US-0298884P.
PR 09-JUL-2001; 2001US-0303459P.
XX
PA (GENE-) GENE LOGIC INC.
XX
PI Mendrick D, Porter MW, Johnson KR, Castle AL, Elashoff MR;
XX
DR WPI; 2002-241625/29.
XX
PT Predicting toxic effects of compounds or the progression of these toxic
PT effects by determining the changes in gene expression in tissues or cells
PT exposed to the toxin and comparing these to gene expression in unexposed
PT tissues or cells.
XX
PS Claim 1; SEQ ID NO 1665; 239pp; English.
XX
XX
XX The invention relates to methods for predicting toxic effects of
XX compounds or the progression of these toxic effects by determining the
XX global changes in gene expression in tissues or cells exposed to the
XX toxin and comparing these to gene expression in unexposed tissues or
XX cells. Also included are methods of predicting at least one toxic effect
XX of a compound or progression of a toxic effect, preferably the
XX hepatotoxicity of a compound, comprising detecting the level of
XX expression in a tissue or cell sample exposed to the compound of two or
XX more genes listed in the specification, where differential expression of
XX the genes is indicative of at least one toxic effect or progression. The
XX method can also be used to identify an agent which modulates the toxic
XX response and predict cellular pathways that a compound modulates in a
XX cell. The methods utilize a set of at least two probes (on a solid
XX support in kit form), where each of the probes comprises a sequence that
XX specifically hybridizes to a gene listed in the specification, a computer
XX system comprising a database containing information identifying the
XX expression level in a tissue or cell sample exposed to a hepatotoxin of a
XX set of genes comprising at least two genes listed in the specification,
XX and a user interface to view the information used to present information
XX identifying the expression level in a tissue or cell of at least one gene
XX listed in the specification. The method is useful for elucidating global

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CC changes in gene expression and for identifying toxicity markers in
CC tissues or cell exposed to a known toxin. The genes may be used as
CC toxicity markers in drug screening and toxicity assays. The genes and
CC gene expression information may be used as diagnostic markers for the
CC prediction or identification of the physiological state of tissue or cell
CC sample that has been exposed to a compound or agent. Hepatotoxicity is
CC characterized by centrilobular necrosis and steatosis. The present
CC sequence is an expressed sequence tag (EST) or cDNA derived from a gene
CC which is differentially expressed in response to a hepatotoxic agent
XX
SQ Sequence 2158 BP; 458 A; 640 C; 619 G; 441 T; 0 U; 0 Other;

```

Alignment of: us-10-726-967a-1 x ABK63758 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity	Quality	Length	Score
20	90.00	77.00	20	89.6
90.00	90.00	90.00	20	80.00
90.00	90.00	90.00	20	80.00

Alignment:

```

22 ThrglnhieglyleAArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
||||:|||||
491 ACCAATCTGGGATCCGATCCGATGCCCCCTTCGACGGGCTGGCAGGGCCACC 540
541 CCTGGGCTTG 550

```

Sequence name: rngp2ndb:ADB52907

Sequence documentation:

```

ID ADB52907 standard; DNA; 2158 BP.
XX
AC ADB52907;
XX
XX
DT 04-DEC-2003 (first entry)
XX
XX
DE Primary rat hepatocyte toxicity modelling related gene SEQ ID NO:3449.
XX
XX toxic effect; gene expression profile; hepatotoxicity; diagnostic marker;
XX toxicity marker; toxicity progression; drug screening;
XX primary rat hepatocyte toxicity modelling; gene; ds.
XX
OS Rattus norvegicus.
XX
PN W02003065993-A2.
XX
PD 14-AUG-2003.
XX
XX
XX 04-FEB-2003; 2003WO-US003482.
XX
XX
XX 04-FEB-2002; 2002US-0353171P.
XX 13-MAR-2002; 2002US-0363534P.
XX 08-APR-2002; 2002US-0370248P.
XX 10-APR-2002; 2002US-0371135P.
XX 10-APR-2002; 2002US-0371135P.
XX 10-APR-2002; 2002US-0371150P.
XX 11-APR-2002; 2002US-0371413P.
XX 19-APR-2002; 2002US-0373601P.
XX 22-APR-2002; 2002US-0373602P.
XX 22-APR-2002; 2002US-0374139P.
XX 08-MAY-2002; 2002US-0378370P.
XX 09-MAY-2002; 2002US-0378652P.
XX 09-MAY-2002; 2002US-0378653P.
XX 09-MAY-2002; 2002US-0378665P.
XX 09-JUL-2002; 2002US-0394230P.
XX 09-JUL-2002; 2002US-0394230P.
XX 04-SEP-2002; 2002US-0407688P.
XX 28-JAN-2003; 2003US-0442900P.

```


ID		ADP44629 standard; mRNA; 5757 BP.
XX		
AC		ADP44629;
XX		
DT		26-AUG-2004 (first entry)
XX		
DE		Human beta-site APP cleaving enzyme type I transcript variant B mRNA.
XX		
KM		neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;
KW	Huntington's;	epinocerebellar ataxia type 1;
KW	dentatorubral-pallidoluysian atrophy type 3; SCA; Machado-Joseph disease;	
KV	beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;	
KW	ASPM; memapsin2; ser; human; transcript variant B.	
XX		
OS	Homo sapiens.	
PX		
PN	WO2004047872-A2.	
PD		
PP	10-JUN-2004.	
PE	26-NOV-2003; 2003MO-US037650.	
PX		
PR	26-NOV-2002; 2002US-0429387P.	
PA	03-FEB-2003; 2003US-044461AP.	
(MEDT) MEDTRONIC INC.		
PI	Kaemmerer WF;	
DY	WPt ; 2004-441106/41.	
PT	New medical system comprising an intracranial access device, a mapping means,	a small interfering RNA or vector encoding the RNA, and a delivery means, useful for treating a neurodegenerative disorder.
Claim 23; SEQ ID NO 19; 226bp; English.		
The invention relates to a novel medical system for treating a neurodegenerative disorder comprising an intracranial access device, a mapping means for locating a predetermined location in the brain, a deliverable amount of a small interfering RNA (siRNA), or vector encoding the siRNA, and a delivery means. The system of the invention has applications related to the CNS and may be useful for treating a neurodegenerative disorder, such as Parkinson's disease, Alzheimer's disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3 (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA). The current sequence is that of the human beta-site APP (amyloid precursor protein) cleaving enzyme type 1 (BACE1; ASP2; memapsin2) transcript variant B mRNA of the invention.		
Sequence 5757 BP; 1487 A; 1488 C; 1392 G; 0 T; 1390 U; 0 Other;		
Alignment of: us-10-726-967a-1 x ADP44629 ..		
Alignment segment 1/1: (-)		
Quality:	35.00	Bscore: 253
Matching Length:	14	Total length: 14
Matching Percent Similarity:	64.29	Matching Percent Identity: 57.14
Total Percent Similarity:	64.29	Total Percent Identity: 57.14
Gaps:	0	
Alignment:		
25 GIYLIEATGLProLeuArgSerClyLyuGIyAlaPro		38
::		
230 GGGAATCGGAGCCGTACTGCACA CGGCGGCCGACGGCT		189
Sequence documentation: ID ADP44628 standard; mRNA; 5832 BP.		

XX	ADP44628;	
AC		
DT	26-AUG-2004 (first entry)	
XX		
DE	Human beta-site APP cleaving enzyme type 1 transcript variant A mRNA.	
XX		
KM	neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;	
KW	Huntington's; spinocerebellar ataxia type 1;	
KW	spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;	
KM	dentatorubral-pallidoluysian atrophy; DRPLA;	
KW	beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;	
ASP2; memapsin2; se; human; transcript variant A.		
XX		
OS	Homo sapiens.	
XX		
PN	WO2004047872-A2.	
XX		
PD	10-JUN-2004.	
XX		
PF	26-NOV-2003; 2003MO-US037650.	
XX		
PR	26-NOV-2002; 2002US-0429387P.	
XX		
PR	03-FEB-2003; 2003US-0444614P.	
XX		
PA	(MEDT) MEDTRONIC INC.	
XX		
PI	Kaemmerer WF;	
XX		
DX	WPI; 2004-441106/41.	
XX		
PT	New medical system comprising an intracranial access device, a mapping	
PT	means, a small interfering RNA or vector encoding the RNA, and a delivery	
PT	means, useful for treating a neurodegenerative disorder.	
XX		
PS	Claim 23; SEQ ID NO 18; 228bp; English.	
XX		
CC	The invention relates to a novel medical system for treating a	
CC	neurodegenerative disorder comprising an intracranial access device, a	
CC	mapping means for locating a predetermined location in the brain, a	
CC	deliverable amount of a small interfering RNA (siRNA), or vector encoding	
CC	the siRNA, and a delivery means. The system of the invention has	
CC	applications related to the CNS and may be useful for treating a	
CC	neurodegenerative disorder, such as Parkinson's disease, Alzheimer's	
CC	disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3	
CC	(Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA).	
CC	The current sequence is that of the human beta-site APP (amyloid	
CC	precursor protein) cleaving enzyme type 1 (BACE1; ASP2; memapsin2)	
CC	transcript variant A mRNA of the invention.	
XX		
SQ	Sequence 5832 BP; 1500 A; 1517 C; 1405 G; 0 T; 1410 U; 0 Other;	
Alignment of:	us-10-726-967a-1 x ADP44628 ..	
Alignment segment 1/1: (-)		
Quality:	35.00	
Matching length:	14	
Total length:	253	
Matching Percent Similarity:	64.29	
Matching Percent Identity:	57.14	
Total Percent Similarity:	64.29	
Total Percent Identity:	57.14	
Gaps:	0	
Alignment:		
25	GIYIIEaTgLeuProLeuArGSeRgLYleuGlYAlaBro	38
GGGATCGGAGCCGCTAACTCGCACGCGCGCGCAGCCT		189
Sequence name:	ringp2ndb:ADQ22186	
Sequence documentation:		
ID	ADQ22186 standard; DNA; 5876 BP.	
XX		

DT	XX	26-AUG-2004 (first entry)
DE	XX	Human soft tissue sarcoma-upregulated DNA - SEQ ID 284.
KW	XX	soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human;
RW	XX	ds.
OS	XX	Homo sapiens.
PN	XX	MO2004048938-A2.
PD	XX	10-JUN-2004.
PF	XX	26-NOV-2003; 2003WO-US038193.
PR	XX	26-NOV-2002; 2002US-0429739P.
PA	XX	(PROT-) PROTEIN DESIGN LABS INC.
PI	XX	Aziz N, Ginsburg WM, Zlotnik A;
DR	XX	WPI; 2004-441208/41.
PT	XX	Early detection of soft tissue sarcoma comprises determining expression
PT	XX	of a gene in a first soft tissue sample and a normal soft tissue sample
PT	XX	and comparing the gene expression, also useful in treating soft tissue
PT	XX	sarcoma.
PS	XX	Example 2; SEQ ID NO 284; 210pp; English.
CC	XX	The invention relates to a novel method for detecting soft tissue sarcoma
CC	XX	which comprises obtaining a first soft tissue sample from an individual,
CC	XX	and a normal soft tissue sample from the same or different individual,
CC	XX	determining the expression of a gene in both samples and comparing the
CC	XX	expression of the gene in both soft tissue samples, where a higher level
CC	XX	of protein expression in the first soft tissue sample indicates the
CC	XX	presence of soft tissue sarcoma. The method of the invention has
CC	XX	cytostatic applications and may be useful for detecting soft tissue
CC	XX	sarcoma, possibly via gene therapy or vaccine production. The nucleic
CC	XX	acid sequences may be useful in diagnostic and screening applications.
CC	XX	The current sequence is that of a human soft tissue sarcoma-upregulated
CC	XX	DNA of the invention. The current sequence is not shown within the
CC	XX	specification per se but was submitted in CD format by the inventor.
SQ	XX	Sequence 5878 BP; 1547 A; 1518 C; 1405 G; 1408 T; 0 U; 0 Other;
Alignment of:	us-10-726-967a-1 x AD017467 ..	
Alignment segment 1/1: (-)		
	Quality: 35.00	Escore: 253
Matching Length:	14	Total Length: 14
Matching Percent Similarity:	64.29	Matching Percent Identity: 57.14
Total Percent Similarity:	64.29	Total Percent Identity: 57.14
Gaps:	0	
Alignment:		
25	GIYITLeArgLeuProLeuArgSerGlyLeuGlyGlyalaPro	38
238	GGGATCGCGAGCCGCTACATCGGCACGCGCGGCCGACGCT	197
Sequence name:	nrgp2ndb:AAA59553	
Sequence documentation:		
ID	AAA59553 standard; DNA; 16080 BP.	
XX	AAAS9553;	
XX	AC	
XX	14-NOV-2000 (first entry)	
DT	XX	DNA clone pCEK Cl.27 encoding a human beta-secretase enzyme.
DE	XX	
XX	XX	

KW	Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;
KM	Amyloid plaque component; Alzheimer's disease; amyloidogenic disease;
KW	inhibitor; ss.
XX	
OS	Homo sapiens.
PN	WO20047618-A2.
PD	17-Aug-2000.
XX	
PF	10-FEB-2000; 2000MO-US003819.
XX	
PR	10-FEB-1999; 99US-0119571P.
XX	
PR	15-JUN-1999; 99US-0139172P.
XX	
PA	(ELAN-) ELAN PHARM INC.
XX	
PI	Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M;
PI	Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L,
XX	
DR	WPI; 2000-533011/48.
XX	
PT	Purified beta-secretase protein used in assays to discover inhibitors
PT	which can be used for the treatment of amyloidogenic diseases e.g.
PT	Alzheimer's disease.
XX	
PS	Disclosure; Fig 13A-E; 121pp; English.
CC	The specification describes a beta-secretase enzyme. The enzyme cleaves
CC	beta-amyloid precursor protein to produce beta-amyloid peptide. This
CC	enzyme is therefore implicated in the production of amyloid plaque
CC	components which accumulate in the brains of individuals afflicted with
CC	Alzheimer's disease. Inhibitors of beta-secretase are administered to a
CC	mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-
CC	like pathology to test if they maintain or improve cognitive ability or
CC	reduce the plaque burden. The compounds are used for the treatment of
CC	amyloidogenic diseases e.g. Alzheimer's disease. The present sequence
CC	encodes a human beta-secretase enzyme
XX	
SQ	Sequence 16080 BP; 3627 A; 4556 C; 3962 G; 3913 T; 0 U; 22 Other;
XX	
Alignment of:	us-10-726-967a-1 x AAAS9553 ..
Alignment segment 1/1: (-)	
	Quality: 35.00
	Matching length: 14
	Matching Percent Similarity: 64.29
	Total Percent Similarity: 64.29
	Gaps: 0
	Score: 254
	Total length: 14
	Matching Percent Identity: 57.14
	Total Percent Identity: 57.14
Alignment:	
25	GIYILEaTgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38
1458	GGGATCCGGAGCCGCTCATCGGACACGGCGGCGGCGAGCCT 1417
Sequence name:	rmgp2ndb:ABK63758
Sequence documentation:	
ID	ABK63758 standard; cDNA; 2158 BP.
XX	
AC	ABK63758;
XX	
DT	18-JUN-2002 (first entry)
XX	
DE	Rat sequence differentially expressed in response to a hepatotoxin #1665
XX	
KW	Rat; ss; hepatotoxin; expressed sequence tag; EST; drug screening;
KW	differential expression; centrilobular necrosis; steatosis.
XX	
OS	Rattus norvegicus.

PN W0200210453-A2.
 XX
 PD 07-FEB-2002.
 XX
 PF 30-JUL-2001; 2001WO-US023872.
 XX
 PR 31-JUL-2000; 2000US-0222040P.
 PR 02-NOV-2000; 2000US-0244880P.
 PR 11-MAY-2001; 2001US-0290029P.
 PR 15-MAY-2001; 2001US-0290645P.
 PR 22-MAY-2001; 2001US-0292336P.
 PR 06-JUN-2001; 2001US-0295798P.
 PR 13-JUN-2001; 2001US-0297457P.
 PR 19-JUN-2001; 2001US-0298884P.
 PR 09-JUL-2001; 2001US-0303459P.
 XX
 PA (GENE-) GENE LOGIC INC.
 PI Mendrick D, Porter MW, Johnson KR, Castle AL, Elashoff MR;
 XX
 XX WPI; 2002-241625/29.
 DR
 XX
 PT Predicting toxic effects of compounds or the progression of these toxic
 PT effects by determining the changes in gene expression in tissues or cells
 PT exposed to the toxin and comparing these to gene expression in unexposed
 PT tissues or cells.
 XX
 PS Claim 1; SEQ ID NO 1665; 239pp; English.
 XX
 XX The invention relates to methods for predicting toxic effects of
 CC compounds or the progression of these toxic effects by determining the
 CC global changes in gene expression in tissues or cells exposed to the
 CC toxin and comparing these to gene expression in unexposed tissues or
 CC cells. Also included are methods or predicting at least one toxic effect
 CC of a compound or progression of a toxic effect, preferably the
 CC hepatotoxicity of a compound, comprising detecting the level of
 CC expression in a tissue or cell sample exposed to the compound of two or
 CC more genes listed in the specification, where differential expression of
 CC the genes is indicative of at least one toxic effect or progression. The
 CC method can also be used to identify an agent which modulates the toxic
 CC response and predict cellular pathways that a compound modulates in a
 CC cell. The methods utilize a set of at least two probes (on a solid
 CC support in kit form), where each of the probes comprises a sequence that
 CC specifically hybridises to a gene listed in the specification, a computer
 CC system comprising a database containing information identifying the
 CC expression level in a tissue or cell sample exposed to a hepatotoxin of a
 CC set of genes comprising at least two genes listed in the specification,
 CC and a user interface to view the information used to present information
 CC identifying the expression level in a tissue or cell of at least one gene
 CC listed in the specification. The method is useful for elucidating global
 CC changes in gene expression and for identifying toxicity markers in
 CC tissues or cell exposed to a known toxin. The genes may be used as
 CC toxicity markers in drug screening and toxicity assays. The genes and
 CC gene expression information may be used as diagnostic markers for the
 CC prediction or identification of the physiological state of tissue or cell
 CC sample that has been exposed to a compound or agent. Hepatotoxicity is
 CC characterised by centrilobular necrosis and steatosis. The present
 CC sequence is an expressed sequence tag (EST) or cDNA derived from a gene
 CC which is differentially expressed in response to a hepatotoxic agent
 CC
 XX Sequence 2158 BP; 458 A; 640 C; 619 G; 441 T; 0 U; 0 Other;
 SQ
 Alignment of: us-10-726-967a-1 x ABK63758 ..
 Alignment segment 1/1: (-)
 Matching Length: 33.00 Total Length: 261
 Matching Percent Similarity: 64.29 Matching Percent Identity: 50.00
 Total Percent Similarity: 64.29 Total Percent Identity: 50.00
 Gaps: 0
 Alignment:

23 GlnHisGlyIleArgLeuProLeuArgSerGlyLeuGly
 182: CAGCGGGGAGTGGGCCCCCTTGTGGGAGCTGGAGGGCGGG 141
 Sequence name: rng2ndb:ADB52907
 Sequence documentation:
 ID ADB52907 standard; DNA; 2158 BP.
 XX
 AC ADB52907;
 XX
 DT 04-DEC-2003 (first entry)
 XX
 DE Primary rat hepatocyte toxicity modelling related gene SEQ ID NO:3449.
 XX
 XX toxic effect; gene expression profile; hepatotoxicity; diagnostic marker;
 KM toxicity marker; toxicity progression; drug screening;
 KM primary rat hepatocyte toxicity modelling; gene; ds.
 XX
 OS Rattus norvegicus.
 XX
 PN W02003065993-A2.
 XX
 PD 14-AUG-2003.
 XX
 PF 04-FEB-2003; 2003WO-US003482.
 XX
 XX 04-FEB-2002; 2002US-0353171P.
 PR 13-MAR-2002; 2002US-0363534P.
 PR 08-APR-2002; 2002US-0370248P.
 PR 10-APR-2002; 2002US-0371134P.
 PR 10-APR-2002; 2002US-0371135P.
 PR 10-APR-2002; 2002US-0371150P.
 PR 11-APR-2002; 2002US-0371413P.
 PR 19-APR-2002; 2002US-0373601P.
 PR 19-APR-2002; 2002US-0373602P.
 PR 22-APR-2002; 2002US-0374139P.
 PR 08-MAY-2002; 2002US-0378370P.
 PR 09-MAY-2002; 2002US-0378652P.
 PR 09-MAY-2002; 2002US-0378653P.
 PR 09-MAY-2002; 2002US-0378655P.
 PR 09-JUL-2002; 2002US-0394230P.
 PR 09-JUL-2002; 2002US-0394253P.
 PR 04-SEP-2002; 2002US-0407688P.
 PR 28-JAN-2003; 2003US-0442900P.
 XX
 PA (GENE-) GENE LOGIC INC.
 PI Mendrick D, Porter M, Johnson K, Higgs B, Castle A, Orr M;
 PI Elashoff M;
 XX
 XX WPI; 2003-731472/69.
 DR
 XX
 PT Determining if a compound induces a toxic effect on a tissue or cell, for
 PT identifying hepatotoxic compounds, comprises comparing a gene expression
 PT profile of a tissue or cell sample to a database of Tox mean and non-Tox
 PT mean values.
 XX
 PS Claim 44; SEQ ID NO 3449; 874pp; English.
 XX
 XX The present invention describes a method for determining whether a
 CC compound induces a toxic effect on a tissue or cell. The method comprises
 CC preparing a gene expression profile of a tissue or cell sample exposed to
 CC the compound, and comparing the gene expression profile to a database
 CC comprising data or information on the Tox mean and non-Tox mean value.
 CC The method is useful for predicting or identifying at least one toxic
 CC effect, particularly hepatotoxicity, of a test or unknown compound. The
 CC genes listed in the specification are useful as diagnostic or toxicity
 CC markers for the prediction or identification of the physiological state
 CC of tissue or cell sample that has been exposed to a compound, or to
 CC identify or predict the toxic effects of a compound or an agent. These
 CC may also be used as markers for monitoring toxicity progression or for

CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
CC human Asp 2(b) protein lacking a transmembrane (TM) domain which is
CC generated by the deletion of the C-terminal TM domain and intracellular
CC domains of human Asp 2(b) protein

XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17895 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Total length:	264
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT      147
```

Sequence name: rngp2ndb: AAD13276

Sequence documentation:

ID AAD13276 standard; cDNA; 1287 BP.

AC AAD13276;

DT 23-OCT-2001 (first entry)

XX Human-Asp2(b) deltaTM protein cDNA.

XX Human: aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX neuroprotective; antisense therapy; Asp2(b) deltaTM protein;
XX gene therapy; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers
XX CDS 1..1287

XX FT /*tag= a
XX FT /product= "Human Asp2(b) deltaTM protein"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANK/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX

DR WPI; 2001-483072/52.

DR P-PSDB; AAE06891.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

XX protease 2, lacking Asp2 transmembrane domain and retaining beta

XX secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Example 10; Page 166-167; 185pp; English.

XX The invention relates to human aspartyl proteases (hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes human aspartyl protease 2b (Hu-Asp2b)
XX deltaTM protein which is obtained by the deletion of C-terminal
XX transmembrane and intracellular domains of Hu-Asp2b. Human Asp2b has beta
XX -secretase activity

XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13276 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Total length:	264
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT      147
```

Sequence name: rngp2ndb: AAD06768

Sequence documentation:

ID AAD06768 standard; cDNA; 1287 BP.

AC AAD06768;

DT 10-AUG-2001 (first entry)

XX Human aspartyl protease 2 (b) delta TM cDNA.

XX Human: alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2; Asp 2;
XX beta-secretase; chromosome 11q23.3-24.1; mutant; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers
XX CDS 1..1287

XX FT /*tag= a
XX FT /product= "Human aspartyl protease 2 (b) delta TM"

XX WO200123533-A2.

XX

PD 05-APR-2001.
 XX 22-SEP-2000; 2000WO-US026080.
 XX 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 XX (PHAA) PHARMACIA & UPJOHN CO.
 PA Gurney M, Bienkowiak MJ,
 PI WPI; 2001-290516/30.
 DR P-PSDB; AAE02598.
 XX
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
 PT protein, useful for the treatment of Alzheimer's disease.
 XX
 PS Example 10; Page 165-166; 189pp; English.
 XX
 CC The present invention relates to enzymes for cleaving the alpha-
 CC secretase site of the amyloid precursor protein (APP) and methods of
 CC identifying those enzymes. The methods may be used to identify enzymes
 CC that may be used to cleave the alpha-secretase cleavage site of the APP
 CC protein. The enzymes may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is human aspartyl protease 2
 CC (Asp 2) (b) delta TM cDNA. The Asp 2 gene from which it is derived is
 CC located on chromosome 11q23.3-24.1. The Asp 2 has beta-secretase protease
 CC activity
 XX
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD06768 ..
 Alignment segment 1/1: (-)

Matching Length:	Quality:	Score:
11	32.00	264
81.82	11	11
81.82	Matching Percent Identity:	54.55
0	Total Percent Identity:	54.55

Gaps: 0

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT
147

```

Sequence name: rngp2ndb:AA511547

Sequence documentation:
 ID AA511547 standard; cDNA; 1287 BP.
 XX
 AC AA511547;
 XX
 XX 24-OCT-2001 (first entry)
 DE Human cDNA encoding Human-pro-Asp 2(b) delta TM.
 XX
 KW Human; Aspartyl protease; beta-secretase; noctropic; ASP2;
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KW amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM; ss; mutant.
 XX
 OS Homo sapiens.
 OS Synthetic.
 OS
 FH Key Location/Qualifiers
 FT CDS 1..1287
 FT /tag= a
 FT /product= "Human-pro-Asp 2 (b) delta TM"
 XX
 PN WO200149098-A2.

XX
 PD 12-JUL-2001.
 XX
 XX 09-MAY-2001; 2001WO-IB000798.
 XX
 XX 09-MAY-2001; 2001WO-IB000798.
 XX
 PA (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Bienkowiak MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2001-502549/55.
 XX
 XX
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Disclosure; Page 166-167; 185pp; English.
 XX
 CC The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes Human-pro- Asp 2(b) delta TM
 CC protein, which lacks the C-terminal transmembrane domain
 XX
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AA511547 ..
 Alignment segment 1/1: (-)

Matching Length:	Quality:	Score:
11	32.00	264
81.82	11	11
81.82	Matching Percent Identity:	54.55
0	Total Percent Identity:	54.55

Gaps: 0

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT
147

```

Sequence name: rngp2ndb:ABL52487

Sequence documentation:
 ID ABL52487 standard; cDNA; 1287 BP.
 XX
 AC ABL52487;

XX 16-JUL-2002 (first entry)
 DT
 XX
 DE Human Asp-2(b)deltaTM nucleotide sequence SEQ ID NO:50.
 XX
 KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
 XX chromosome 11q23.3-24.1; gene; ss.
 XX
 OS Homo sapiens.
 XX
 FH Location/Qualifiers
 FT CDS
 FT 1..1287
 FT /tag= a
 FT /product= "Human Asp-2(b)delta TM"
 XX
 PN GB2367060-A;
 PD 27-MAR-2002.
 PF 29-OCT-2001; 2001GB-00025934.
 XX
 XX 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99MO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 PR 22-SEP-2000; 2000GB-00023315.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Bienkowski MJ, Gurney M;
 DR WPI; 2002-397167/43.
 DR P-PSDB; ABB78607.
 XX
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
 XX
 PS Example 10; Page 137; 182pp; English.
 XX
 XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (1) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (ii) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (iii) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (iii') comprising a sequence that
 CC hybridises under stringent conditions to (iii) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (iv)
 CC comprising (iii) or (iii'); and (5) a host cell (v) transformed or
 CC transfected with (iii), (iii') and/or (iv). The hu-Asp1 protease
 CC substrate (1) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (ii) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes human Asp-2(b)deltaTM, which is given in an example from
 CC the present invention
 XX
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ABL52487 ..
 Alignment segment 1/1: (-)
 Quality: 32.00 Score: 264
 Matching length: 11 Total length: 11

Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
 179 AGGCTGCCCCCTCCGCGCGGCTCTCGGACTCT 147
 Sequence name: rngp2nhd:ADJ94362
 Sequence documentation:
 ID ADJ94362 standard; cDNA; 1287 BP.
 XX
 AC ADJ94362;
 XX
 DT 03-JUN-2004 (first entry)
 XX
 DE Human-pro-Asp-2(b)deltaTM cDNA.
 XX
 XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 KM neurotropic; neuroprotective; amyloid beta; mutant.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN US6706485-B1.
 XX
 PD 16-MAR-2004.
 PF 12-APR-2000; 2000US-00548376.
 XX
 XX 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99MO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2004-236722/22.
 DR P-PSDB; ADJ94363.
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.
 XX
 XX Example 10; SEQ ID NO 50; 1099p; English.
 PS
 XX The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptides, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NV, designated e.g. APP695-Sw
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of

[illegible]

```
PT disease.
```

```
XX
```

```
PS Example 10; SEQ ID NO 50; 108bp; English.
```

```
XX
```

```
CC The invention relates to a method for identifying an agent that decreases
```

```
CC the protease activity of the aspartyl protease (Aap) polypeptide. It also
```

```
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
```

```
CC cleavage site of the amyloid precursor protein (APP). The invention is
```

```
CC useful in preparing a composition for treating or preventing Alzheimer's
```

```
CC disease. It is also useful in gene therapy. The present sequence is human
```

```
CC Asp2(b) mutant DNA. This sequence is used to illustrate the method of the
```

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CC invention.
```

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XX
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```
SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
```

```
Alignment of: us-10-726-967a-1 x AD050458 ..
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```
Alignment segment 1/1: (-)
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Matching Percent Similarity:
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Total Percent Similarity:
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Quality: 32.00 Matching length: 11 Total length: 264
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Gaps: 0 Matching Percent Identity: 54.55
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Score: 54.55
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Alignment:
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27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
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```
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```

```
179 AAGCTGCCCTCCTCGGC CGGGCTCTCGGGCTCT
```

```
Sequence name: rngp2ndb:ADR75371
```

```
Sequence documentation:
```

```
ID ADR75371 standard; DNA; 1287 BP.
```

```
AC ADR75371;
```

```
XX
```

```
DT 18-NOV-2004 (first entry)
```

```
XX
```

```
DE Human Asp2(b)deltatm mutant DNA.
```

```
XX
```

```
KW Aspartyl protease; Aap; amyloid precursor protein; APP; amyloid beta;
```

```
KX chromosome identification; Alzheimer's disease; human; mutant; gene; de-
```

```
OS Homo sapiens.
```

```
OS Synthetic.
```

```
XX
```

```
Key Location/Qualifiers
```

```
FT CDS 1..1287
```

```
FT /tag= a
```

```
FT /product= "Human Asp2(b) mutant protein"
```

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XX US2004166507-A1.
```

```
XX
```

```
PD 26-AUG-2004.
```

```
PD
```

```
XX
```

```
PF 29-AUG-2003; 2003US-00652045.
```

```
XX
```

```
PR 24-SEP-1998; 98US-0101594P.
```

```
PR 23-SEP-1999; 99US-0040413P.
```

```
PR 23-SEP-1999; 99US-0155493P.
```

```
PR 13-OCT-1999; 99US-00416901.
```

```
XX
```

```
PA (GURN/) GURNEY M E.
```

```
PA (BIEN/) BIENKOWAKI M J.
```

```
PA (HEIN/) HEINRIKSON R L.
```

```
PA (PARO/) PARODI L A.
```

```
EA (YANR/) YAN R.
```

```
XX
```

```
Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
```

```
XX WPI; 2004-624916/60.
```

```
XX
```


XX 09-MAY-2001; 2001WO-IB000797.
PF 09-MAY-2001; 2001WO-IB000797.
PR 09-MAY-2001; 2001WO-IB000797.
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX BIENKOWSKI MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
PI WPI; 2001-502548/55.
XX P-PSDB; AAU07113.
DR Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Example 9; Fig 8; 185pp; English.
PS The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid protein precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC; and for reducing cellular production of amyloid beta (Abeta) from APP.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; for identifying modulators of amyloid-beta (Abeta)
CC peptide production, and for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from APP nucleic acid sequences are useful for detecting Hu-Asp
CC nucleic acids in vitro assays and in Northern and Southern blots. The
CC present sequence represents the coding sequence of T7-human Asp-2a delta
CC TM (low GC) construct which has a T7 tag, has the GC content of the 5'
CC sequence reduced by site-directed mutagenesis, and lacks the
CC transmembrane domain. This construct was used for bacterial expression
CC and purification of human Asp2a. (Updated on 11-SEP-2003 to standardise
CC OS field)
XX SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAS11713 ..
Alignment segment 1/1: (-)
Matching length: 32.00
Matching Percent Similarity: 81.82
Total Percent Similarity: 81.82
Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::|||||::: 37
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 87
Sequence name: rngp2ndb:AAD17876
Sequence documentation:
ID AAD17876 standard; cDNA; 1302 BP.
XX
AC AAD17876;

XX 10-DEC-2001 (first entry)
DT Human-pro-Asp 2(a) protein lacking TM domain (low GC) encoding cDNA.
XX
DE Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP.
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;
KM Human-pro-Asp 2(a) protein; ss.
XX
XX Homo sapiens.
OS Synthetic.
OS
FH Key Location/Qualifiers
FT CDS 1..1302
FT /tag= a
FT /product= "Human-pro-Asp 2(a) protein lacking
FT transmembrane domain"
XX
PN GB235767-A.
XX
PD 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-0040413.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHMA) PHARMACIA & UPJOHN CO.
PI BIENKOWSKI MJ, Gurney M;
XX WPI; 2001-444208/48.
DR P-PSDB; AAE10640.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 9; Fig 8; 187pp; English.
PS The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
CC human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain (low GC)
CC which is generated from human Asp 2(a) protein by the deletion of its C-
CC terminal transmembrane domain and change of degenerate codons bases in 15
CC amino acid positions from G/C to A/T to reduce the GC content
XX
SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD17876 ..
Alignment segment 1/1: (-)
Matching length: 32.00
Matching Percent Similarity: 81.82
Total Percent Similarity: 81.82
Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::|||||::: 37
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 87
Sequence name: rngp2ndb:AAD17876
Sequence documentation:
ID AAD17876 standard; cDNA; 1302 BP.
XX
AC AAD17876;

CC that may be used to cleave the alpha-secretase cleavage site of the APP
 CC protein. The enzyme may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is a cDNA encoding human
 CC Aspartyl protease 2a (Asp-2a) deltatm protein which is obtained by
 CC deleting the transmembrane domain and adding a T7 tag at the N-terminal
 CC end. This sequence has beta-secretase protease activity. Note: The
 CC present sequence is also shown in figure 8 of the specification, but
 CC lacks nucleotides at its 3' end. This sequence shown in figure 8 has a
 CC stop codon at its 3' end

SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06750 ..

Alignment segment 1/1: (-)

Matching Percent	Quality:	32.00	Score:	264
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	54.55
Gaps:	0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
119 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT
      37
      87
  
```

Sequence name: trngp2ndb:AA511528

Sequence documentation:
 ID AA511528 standard; cDNA; 1302 BP.

XX AA511528;

XX 24-OCT-2001 (first entry)

XX Human cDNA encoding Human-pro-Asp 2(a) delta TM (low GC).

XX Human; Aspartyl protease; beta-secretase; neurotic; Asp2;
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KW amyloid-beta; Abeta; ss; Human-pro-Asp 2(a) delta TM (low GC).

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a

FT /product= "Human-pro-Asp 2(a) delta TM (low GC)"

PN MO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000798.

XX 09-MAY-2001; 2001MO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEIRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX PI Bienkowski MJ, Gurney ME, Heiriksion RL, Parodi LA, Yan R;

XX DR MPI; 2001-502549/55.

XX DR P-PSDB; AAU06614.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Example 9; Fig 8; 185bp; English.

XX The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isofom of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to APP
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes Human-pro-Asp 2(a) delta TM
 CC (low GC), a synthetic version of Asp 2(a) whose GC content has been
 CC altered to facilitate expression in E.coli

SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511528 ..

Alignment segment 1/1: (-)

Matching Percent	Quality:	32.00	Score:	264
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	54.55
Gaps:	0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
119 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT
      37
      87
  
```

Sequence name: trngp2ndb:ABL52468

Sequence documentation:
 ID ABL52468 standard; cDNA; 1302 BP.

XX ABL52468;

XX 16-JUL-2002 (first entry)

XX Human-pro-Asp-2(a)delatm (low GC) nucleotide sequence SEQ ID NO:25.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
 KW amyloid precursor protein; APP; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a

FT /product= "human-pro-Asp-2(a)delatm (low GC)"

PN GB2367060-A.

XX 27-MAR-2002.

Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
119 AAGCTGCCCCCTCCGCGCGCTCTCGGCTCT

37

87

Sequence name: rngp2ndb:AD050433

Sequence documentation:

ID AD050433 standard; DNA; 1302 BP.

AC AD050433;

DT 29-JUL-2004 (first entry)

DE Human-pro-Asp-2(a)deltaTM mutant DNA.

KM Aspartyl protease; Asp, beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; gene; mutant; ds.

OS Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a /product= "Human-pro-Asp-2(a)deltaTM mutant protein"

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

DR WPI; 2004-387112/36.

DR P-PSDB; AD050434.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.

XX Example 9; SEQ ID NO 25; 108bp; English.

XX The invention relates to a method for identifying an agent that decreases
XX the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX provides enzyme and enzymatic procedures for cleaving the beta secretase
XX cleavage site of the amyloid precursor protein (APP). The invention is
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease. It is also useful in gene therapy. The present sequence is human
XX -pro-Asp-2(a)deltaTM mutant DNA. This sequence is used to illustrate the
XX method of the invention.

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050433 ..

Alignment segment 1/1: (-)

Quality: 32.00
Matching length: 11
Total length: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|
119 AAGCTGCCCCCTCCGCGCGCTCTCGGCTCT

37

87

Sequence name: rngp2ndb:ADR75346

Sequence documentation:

ID ADR75346 standard; DNA; 1302 BP.

AC ADR75346;

DT 18-NOV-2004 (first entry)

DE Human-pro-Asp-2(a)deltaTM mutant DNA.

KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KM chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

OS Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a /product= "Human-pro-Asp-2(a)deltaTM mutant protein"

XX US2004166507-A1.

XX 26-AUG-2004.

XX 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

PA (BIEN/) BIENKOWSKI M J.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

DR WPI; 2004-624916/60.

DR P-PSDB; ADR75347.

XX Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.

XX Example 9; SEQ ID NO 25; 107bp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridize with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying candidates for modulate the progression of
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful

CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the human-pro-Asp-2(a)deltaTM mutant DNA. This
CC sequence is used to illustrate the method of the invention.
XX
SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADR5346 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11 Total length: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
119 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 87
Sequence name: rngp2ndb:AA511733
Sequence documentation:
ID AA511733 standard; DNA; 1305 BP.
XX
AC AA511733;
XX
DT 09-SEP-2004 (revised)
DT 24-OCT-2001 (first entry)
XX
DE DNA encoding human aspartyl protease 2b deltaTM (His)6.
XX
KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;
KM beta-secretase; Alzheimer's disease; ds.
XX
OS Homo sapiens.
OS Unidentified.
XX
FH Key CDS Location/Qualifiers
FT 1..1305
FT /*tag= a
FT /product= "Human Aspartyl protease-2b delta TM (His)6"
FT /transl_except= (pos:1285..1287, aa:His)
FT /transl_except= (pos:1288..1290, aa:His)
FT /transl_except= (pos:1291..1293, aa:His)
FT /transl_except= (pos:1294..1296, aa:His)
FT /transl_except= (pos:1297..1299, aa:His)
FT /transl_except= (pos:1300..1302, aa:His)
XX
FT MO200149097-A2.
XX
PD 12-JUL-2001.
XX
PD 09-MAY-2001; 2001MO-IB000797.
XX
PR 09-MAY-2001; 2001MO-IB000797.
XX
PA (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
PI Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX P-PSDB; AAU07220.
XX
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
PS Claim 149, Page 168-169; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
CC Agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (Abeta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
CC nucleic acids in in vitro assays and in Northern and Southern blots. The
CC present sequence represents the coding sequence of human Asp-2b delta
CC TM(His)6 construct which has a 6 histidine tag and lacks the
CC transmembrane domain. This construct was used for bacterial expression
CC and purification of human Asp2b
XX
CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
XX
SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AA511733 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11 Total length: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147
Sequence name: rngp2ndb:AA17896
Sequence documentation:
ID AAD17896 standard; cDNA; 1305 BP.
XX
AC AAD17896;
XX
DT 10-DEC-2001 (first entry)
XX
DE Human-Asp 2(b) lacking TM domain (His)6 protein encoding cDNA.
XX
KW Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;
KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KM amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;
KM ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key CDS Location/Qualifiers
FT 1..1305
FT /*tag= a
FT /product= "Human-Asp 2(b) lacking transmembrane domain
FT (His)6 protein"

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FT      /transl_except= (pos:1285..1287, aa:His)
FT      /transl_except= (pos:1288..1290, aa:His)
FT      /transl_except= (pos:1291..1293, aa:His)
FT      /transl_except= (pos:1294..1296, aa:His)
FT      /transl_except= (pos:1297..1299, aa:His)
FT      /transl_except= (pos:1300..1302, aa:His)
PN      GB2357767-A.
PD      04-JUL-2001.
XX      22-SEP-2000; 2000GB-00023315.
XX      23-SEP-1999; 99US-00404133.
XX      23-SEP-1999; 99US-0155493P.
XX      23-SEP-1999; 99WO-US020881.
XX      13-OCT-1999; 99US-00416901.
XX      06-DEC-1999; 99US-0169232P.
XX      (PHMA ) PHARMACIA & UPJOHN CO.
XX      Bienkowiaki MJ, Gurney M;
XX      WPI: 2001-444208/48.
XX      P-PSDB; AAE10647.
XX      Polypeptide comprising fragments of human aspartyl protease with amyloid
XX      precursor protein processing activity and alpha-secretase activity, for
XX      identifying modulators useful in treating Alzheimer's disease.
XX      Example 10; Page 138; 187pp; English.
XX      The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX      proteins which lack transmembrane domain or amino terminal domain or
XX      cytoplasmic domain and retains alpha-secretase activity and amyloid
XX      precursor precursor (APP) processing activity. The proteins of the
XX      invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX      in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX      activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX      are useful for treating Alzheimer's disease (AD) which causes progressive
XX      dementia with consequent formation of amyloid plaques, neurofibrillary
XX      tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX      for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX      with the substrate under acidic conditions and determining the level of
XX      hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
XX      human Asp 2(b) lacking a transmembrane (TM) domain (His)6 protein which
XX      is generated from human Asp 2(b) protein by the deletion of its C-
XX      terminal TM domain and addition of hexa-histidine tag at its C-terminus
XX      SO      Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD17896 ..
Alignment segment 1/1: (-)
      Quality:      32.00      EScore:      264
      Matching length: 81.82      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0
Alignment:
      27 ArgLeuProlLeuArgSerGlyLeuGlyGlyAla      37
      :::::::::::::::::::::
      179 AAGCTGCCCCCTCCGCGCGCTCTCTCGGCTCTCT      147
Sequence name: rngp2ndb:AAD13277
Sequence documentation:
ID      AAD13277 standard; cDNA, 1305 BP.
XX      AAD13277;
AC
```

```
XX      23-OCT-2001 (first entry)
DT      Human-Asp2(b) delatm (His)6 protein cDNA.
XX      Human-Asp2(b) delatm (His)6 protein cDNA.
DE      Human, aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
XX      beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX      neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
XX      neuroprotective; antisense therapy; Asp2(b) delatm (His)6 protein;
XX      gene therapy; ss.
XX      Homo sapiens.
OS      Synthetic.
XX      Key
XX      CDS      Location/Qualifiers
FT      1..1305
FT      CDS      /tag= a
FT      /product= "Human Asp2(b) delatm (His)6 protein"
XX      WO200150829-A2.
XX      19-JUL-2001.
XX      09-MAY-2001; 2001WO-IB000799.
XX      09-MAY-2001; 2001WO-IB000799.
XX      (BIEN/) BIENKOWSKI M J.
XX      (GURN/) GURNEY M E.
XX      (HEIN/) HEINRIKSON R L.
XX      (PARO/) PARODI L A.
XX      (YANR/) YAN R.
XX      Bienkowiaki MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX      WPI: 2001-483072/52.
XX      P-PSDB; AAE06892.
XX      Novel purified polypeptide comprising fragment of mammalian aspartyl
XX      protease 2, lacking Asp2 transmembrane domain and retaining beta
XX      secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX      activity.
XX      Example 10; Page 168-169; 185pp; English.
XX      The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX      precursor protein (APP) isoforms and their corresponding DNA molecules.
XX      Human aspartyl proteases can act as beta-secretase proteases useful for
XX      treating Alzheimer's disease. APP isoforms are useful for identifying
XX      modulators of amyloid-beta peptide production, for use in designing
XX      therapeutics for the treatment and prevention of Alzheimer's disease,
XX      dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX      and neuronal loss. APP isoforms are also used in methods for identifying
XX      inhibitors and modulators of human Asp2 activity. The invention relates
XX      to a method for identifying agents that modulate the activity of human
XX      aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX      as a means to screen in cellular assays for the inhibitors of beta- and
XX      gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX      polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX      Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX      The present cDNA sequence encodes Human aspartyl protease 2b (Hu-Asp2b)
XX      delatm (His)6 protein which is obtained by the deletion of C-terminal
XX      transmembrane domain and addition of a hexa-histidine tag at the C-
XX      terminal end of Hu-Asp2b. Human Asp2b has beta-secretase activity
XX      SO      Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD13277 ..
Alignment segment 1/1: (-)
      Quality:      32.00      EScore:      264
      Matching length: 11      Total length: 11
```


CC protein precursor (APP) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridise to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting hu-APP nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes Human-pro- Asp 2(b) delta TM
 CC protein, which lacks the C-terminal transmembrane domain and has a His
 CC tag to aid purification

SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11548 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGGCGGCTCTCGGGCTCT      147

```

Sequence name: rngp2ndb:ABL52488

Sequence documentation:

ID ABL52488 standard; cDNA; 1305 BP.

AC ABL52488;

DT 16-JUL-2002 (first entry)

XX Human Asp-2(b) deltaTM(His)6 nucleotide sequence SEQ ID NO:52.

KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KM Chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1305

FT /tag= a

FT /product= "Human Asp-2(b) deltaTM(His)6"

FT /transl_except= (pos:1285..1287,aa:His)

FT /transl_except= (pos:1288..1290,aa:His)

FT /transl_except= (pos:1291..1293,aa:His)

FT /transl_except= (pos:1294..1296,aa:His)

FT /transl_except= (pos:1297..1299,aa:His)

FT /transl_except= (pos:1300..1302,aa:His)

XX GB2367060-A.

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00415901.
 PR 06-DEC-1999; 99US-0169232P.
 PR 22-SEP-2000; 2000GB-00023315.
 XX (PHMA) PHARMACIA & UPJOHN CO.
 PA
 PI Bienkowski MJ, Gurney M,
 XX WPI, 2002-397167/43.
 DR P-FSDB; ABB78608.
 XX

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

PS Example 10; Page 139; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC -coding strand complementary to a defined 1804 nucleotide sequence (see
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 CC comprising (III) or (III') and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease or
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose disease
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes human Asp-2(b) deltaTM(His)6, which is given in an
 CC example from the present invention

XX SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52488 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGGCGGCTCTCGGGCTCT      147

```

Sequence name: rngp2ndb:ADJ94364

Sequence documentation:

ID ADJ94364 standard; cDNA; 1305 BP.

XX ADJ94364;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(b) deltaTM(His)6 cDNA.

XX

KW Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

KM nootropic; neuroprotective; amyloid beta; mutant.
 XX
 OS Homo sapiens.
 XX Synthetic.
 XX US6706485-B1.
 XX 16-MAR-2004.
 XX
 PF 12-APR-2000; 2000US-00548376.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99MO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2004-236722/22.
 DR P-PSDB; ADJ94365.
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.
 XX
 PS Example 10; SEQ ID NO 52; 1099P; English.
 XX
 CC The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminus amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.
 XX
 SO Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADJ94364 ..
 Alignment segment 1/1: (-)
 Quality: 32.00
 Matching length: 11
 Matching Percent Similarity: 81.82
 Total Percent Similarity: 81.82
 Gaps: 0
 Total length: 264
 Matching length: 11
 Matching Percent Identity: 54.55
 Total Percent Identity: 54.55

Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
 :::::::::::::::::::::
 179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGACTCT 147
 Sequence name: rngp2nrb:ADJ050460
 Sequence documentation:
 ID ADJ050460 standard; DNA; 1305 BP.
 XX
 AC ADJ050460;
 XX
 DT 29-JUL-2004 (first entry)
 XX
 DE Human Asp2(b) deltatm(his)6 DNA.
 XX
 KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
 KM Alzheimer's disease; gene therapy; human; gene; ds.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key
 FT CDS
 FT 1..1305
 FT /*tag= a
 FT /product= "Human Asp-2(b) deltatm(his)6 protein"
 FT /transl_except= (pos:1385..1387, aa:His)
 FT /transl_except= (pos:1388..1390, aa:His)
 FT /transl_except= (pos:1391..1393, aa:His)
 FT /transl_except= (pos:1394..1396, aa:His)
 FT /transl_except= (pos:1397..1399, aa:His)
 FT /transl_except= (pos:1400..1402, aa:His)
 XX
 XX US6737510-B1.
 XX
 PD 18-MAY-2004.
 XX
 PF 12-APR-2000; 2000US-00548373.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99MO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2004-387112/36.
 DR P-PSDB; ADJ050461.
 XX
 PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
 PT involved in processing amyloid precursor protein into amyloid beta,
 PT useful in preparing a composition for treating or preventing Alzheimer's
 PT disease.
 XX
 PS Example 10; SEQ ID NO 52; 1099P; English.
 XX
 CC The invention relates to a method for identifying an agent that decreases
 CC the protease activity of the aspartyl protease (asp) polypeptide. It also
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase
 CC cleavage site of the amyloid precursor protein (APP). The invention is
 CC useful in preparing a composition for treating or preventing Alzheimer's
 CC disease. It is also useful in gene therapy. The present sequence is human
 CC Asp2(b) deltatm(his)6 DNA. This sequence is used to illustrate the method
 CC of the invention.
 XX
 SO Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADJ050460 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147
```

Sequence name: rngp2ndb:ADR75373

Sequence documentation:

ID ADR75373 standard; DNA; 1305 BP.

AC ADR75373;

DT 18-NOV-2004 (first entry)

DE Human Asp2(b) delcATM(His) 6 DNA.

KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; human; gene; ds.

OS Homo sapiens.

OS Synthetic.

Key Location/Qualifiers

FT CDS

```
1..1305
/*tag= a
/product= "Human Asp-2(b)delcATM(His) 6 protein"
/transl_except= (pos:1285..1287, aa:His)
/transl_except= (pos:1288..1290, aa:His)
/transl_except= (pos:1291..1293, aa:His)
/transl_except= (pos:1294..1296, aa:His)
/transl_except= (pos:1297..1299, aa:His)
/transl_except= (pos:1300..1302, aa:His)
```

PN US2004166507-A1.

PD 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

PA (BIEN/) BIENKOWAKI M J.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX Gurney ME, Bienkowaki MJ, Heinrichson RL, Parodi LA, Yan R;

PI MPI; 2004-624916/60.

DR P-PSDB; ADR75374.

XX Novel purified/isolated polynucleotide encoding polypeptide having

PT aspartyl protease activity involved in processing amyloid precursor

PT protein into amyloid beta, useful in identifying agent decreasing

PT activity of aspartyl protease.

XX Example 10; SEQ ID NO 52; 107pp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl

CC protease (asp) polypeptides having aspartyl protease activity involved in

CC processing amyloid precursor protein (APP) into amyloid beta. The

CC invention also relates to a method for identifying an agent that

CC decreases the protease activity of the Asp. Asp DNA is useful in

CC chromosome identification as they can hybridise with a specific location

CC on a human chromosome and in identifying the relationship between genes

CC and diseases (particular gene responsible for causing diseases). It is

CC also useful for identifying candidates to modulate the progression of

CC Alzheimer's disease. Asp is useful in raising antibodies that are useful

CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The

CC present sequence is the human Asp2(b)delcATM(His) 6 DNA. This sequence is

CC used to illustrate the method of the invention.

XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75373 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147
```

Sequence name: rngp2ndb:AAA15668

Sequence documentation:

ID AAA15668 standard; DNA; 1341 BP.

AC AAA15668;

DT 15-SEP-2003 (revised)

DT 06-AUG-2003 (revised)

DT 03-AUG-2000 (first entry)

DE T7-caspase-human-pro-Asp-2(a)-delcATM nucleotide sequence.

KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; aa;

KM Alzheimer's disease; beta secretase site;

KM T7-caspase-human-pro-Asp-2(a)-delcATM.

XX Homo sapiens.

OS Enterobacteria phage T7.

OS Chimeric.

PN WO200017369-A2.

XX 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

XX (PHAA) PHARMACIA & UPJOHN CO.

PA Gurney ME, Bienkowaki MJ, Heinrichson RL, Parodi LA, Yan R;

PI MPI; 2000-103209/26.

DR P-PSDB; AAY88431.

XX New enzyme designated human aspartase useful in research into Alzheimer's

PT Disease is capable of cleaving amyloid protein precursor at the beta

PT secretase site to produce amyloid beta peptide.

XX Example 9, Fig 6; 163pp; English.

XX This sequence represents a modified version of the human aspartase 2

CC

(Asp2) nucleotide sequence. The sequence is used in the bacterial expression of human Asp2L. The invention relates to a protease (e.g. Asp2) capable of cleaving the beta secretase site of amyloid precursor protein (APP). The protease contains a sequence encoding the amino acid sequence DTG and a sequence encoding DSG or DTG separated by 100-300 amino acids. When mutated the APP gene causes an autosomal dominant form of Alzheimer's disease. APP localises to the cell surface membrane and have a single C-terminal transmembrane domain. Proteolytic processing of APP produces the amyloid beta protein, which is possibly very important in Alzheimer's disease. The invention includes a nucleotide sequence encoding the protease, a vector containing the nucleotide sequence, and a cell line comprising the vector. Methods for screening for inhibitors of beta secretase activity are also given in the invention. The human aspartase protein and nucleotide sequences and the methods for identifying inhibitors of the protease, are useful in the treatment of CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to correct OS field.) (Updated on 15-SEP-2003 to standardise OS field)

Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11711 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
158 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT      126

```

Sequence name: rngp2ndb:AAS11711

Sequence documentation:

ID AAS11711 standard; DNA; 1341 BP.

XX AAS11711;

XX 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

DE DNA encoding T7-human aspartyl protease 2a deltaTM (T7HuAsp-2adeltaTM).

XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KM beta-secretase; Alzheimer's disease; ds; T7HuAsp-2adeltaTM.

XX Homo sapiens.

OS Enterobacteria phage T7.

XX Key

FT CDS

FT Location/Qualifiers

FT 1..1341

FT /*tag= a

FT /product= "T7-Aspartyl protease-2a delta TM"

FT sig_peptide

FT 1..42

FT /*tag= b

FT mat_peptide

FT 43..1339

FT /*tag= C

FT /note= "Mature T7-Aspartyl protease-2a delta TM"

FT

XX WO200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX

PA (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

PI Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502548/55.

DR P-PSDB; AAU07211.

XX

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX

XX Example 9; Fig 6; 185pp; English.

XX

XX The invention relates to a novel purified polypeptide comprising a

CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the

CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide

CC and the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. Also included is an isoform of amyloid protein precursor (APP)

CC comprising the amino acid sequence of a APP or its fragment containing an

CC APP cleavage site recognizable by a mammalian beta-secretase, and further

CC comprising two lysine residues at the carboxyl terminus of the amino acid

CC sequence of the mammalian APP or APP fragment. The polypeptides are used

CC for assaying for modulators of beta-secretase activity; identifying

CC agents that inhibit the APP processing activity of human Asp2 aspartyl

CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2

CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.

CC Agents identified by the above methods are useful for treating

CC Alzheimer's disease; and for identifying modulators of amyloid beta

CC (Abeta) peptide production, for use in designing therapeutics for the

CC treatment or prevention of Alzheimer's disease. Probes and primers

CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp

CC nucleic acids in in vitro assays and in Northern and Southern blots. The

CC present sequence represents the coding sequence of T7-human Asp-2a delta

CC TM construct which has a T7 tag and lacks the transmembrane domain. This

CC construct was used for bacterial expression and purification of human

CC Asp2a. (Updated on 11-SEP-2003 to standardise OS field)

XX

Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11711 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
158 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT      126

```

Sequence name: rngp2ndb:AAU17874

Sequence documentation:

ID AAU17874 standard; cDNA; 1341 BP.

XX AAD17874;

XX

DT 10-DEC-2001 (first entry)

DE T7-Human-pro-Asp 2(a) protein lacking TM domain encoding cDNA.

XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;

KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

XX

[illegible]

Sequence name:	ringp2ndb:AA13030
Sequence documentation:	
ID	AA13030 standard; cDNA; 1341 BP.
AC	AA13030;
XX	
DT	23-OCT-2001 (first entry)
XX	
DE	T7-Human-pro-Asp2(a) deltatM protein cDNA.
XX	
KM	Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KM	beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM	neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KM	neuroprotective; antisense therapy; gene therapy;
KM	pro-Asp2(a) deltatM protein; ss.
XX	
OS	Homo sapiens.
OS	Synthetic.
FT	
FT	Key
FT	Location/Qualifiers
FT	1..1341
FT	/*tag= a
FT	/product= "T7-Human-pro-Asp2(a) deltatM protein"
XX	
PN	W0200150829-A2.
XX	
PD	19-JUL-2001.
XX	
PF	09-MAY-2001; 2001WO-IB000799.
XX	
PR	09-MAY-2001; 2001WO-IB000799.
XX	
PA	(BIEN/) BIENKOWSKI M J.
PA	(GURN/) GURNEY M E.
PA	(HEIN/) HEINRIKSON R L.
PA	(PARO/) PARODI L A.
PA	(YANR/) YAN R.
XX	
P1	Bienskowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX	
DR	WPI; 2001-483072/52.
XX	
DR	P-PSDB; AAE06868.
XX	
PT	Novel purified polypeptide comprising fragment of mammalian aspartyl
PT	protease 2, lacking Asp2 transmembrane domain and retaining beta
PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT	activity.
XX	
PS	Example 9; Fig 6; 185pp; English.
XX	
CC	The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC	precursor protein (APP) isoforms and their corresponding DNA molecules.
CC	Human aspartyl proteases can act as beta-secretase proteases useful for
CC	treating Alzheimer's disease. APP isoforms are useful for identifying
CC	modulators of amyloid-beta peptide production, for use in designing
CC	therapeutics for the treatment and prevention of Alzheimer's disease.
CC	dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC	and neuronal loss. APP isoforms are also used in methods for identifying
CC	inhibitors and modulators of human Asp2 activity. The invention relates
CC	to a method for identifying agents that modulate the activity of human
CC	aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC	as a means to screen in cellular assays for the inhibitors of beta- and
CC	gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC	polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC	Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC	The present cDNA sequence encodes T7-Human-pro-aspartyl protease 2a
CC	(Asp2a) deltatM protein which is obtained by the addition of T7 tag at
CC	the N-terminal end and deletion of transmembrane domain at the C-terminal
CC	end of Hu-Asp2a. Human Asp2a has beta-secretase activity
XX	
90	Sequence 1341 BP; 288 A; 386 C; 368 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13030

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
158 AAGCTGCCCCCTCCGCGGCGGCTCTCGGCTCT 126
```

Sequence name: rngp2ndb: AAD06748

Sequence documentation:

ID AAD06748 standard; CDNA; 1341 BP.

AC AAD06748;

DT 10-AUG-2001 (first entry)

DE T7-Human-pro-Asp-2(a) delta TM protein cDNA.

KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
KW beta-secretase; Asp-2a delta TM; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers
FT CDS 1..1341
FT /*tag= a
FT /product= "T7-Human-pro-Asp-2(a) delta TM protein"

XX WO200123533-A2.

XX 05-APR-2001.

XX 22-SEP-2000; 2000WO-US026080.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PAAA) PHARMACIA & UPJOHN CO.

XX Gurney M, Bienkowski MJ;

XX WPI; 2001-290516/30.

XX P-PSDB; AAE02590.

XX Enzymes that cleave the alpha-secretase site of the amyloid precursor protein, useful for the treatment of Alzheimer's disease.

XX Example 9; Fig 6; 189pp; English.

XX The present invention relates to enzymes for cleaving the alpha-secretase site of the amyloid precursor protein (APP) and methods of identifying those enzymes. The methods may be used to identify enzymes that may be used to cleave the alpha-secretase cleavage site of the APP protein. The enzymes may be used to treat or modulate the progress of Alzheimer's disease. The present sequence is a cDNA encoding human T7 aspartyl protease 2a (Asp 2a) delta TM protein which is obtained by deleting the transmembrane domain and adding a T7 tag at the N-terminal end. This protein has beta-secretase protease activity

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06748

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
158 AAGCTGCCCCCTCCGCGGCGGCTCTCGGCTCT 126
```

Sequence name: rngp2ndb: AAS11526

Sequence documentation:

ID AAS11526 standard; CDNA; 1341 BP.

AC AAS11526;

DT 24-OCT-2001 (first entry)

DE Human cDNA encoding the T7-Human-pro-Asp 2(a) delta TM fusion protein.

XX Human; Aspartyl protease; beta-secretase; neurotropic; Asp2;
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW amyloid-beta; Abeta; T7-Human-pro-Asp 2(a) delta TM; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers
FT CDS 1..1341
FT /*tag= a
FT /product= "T7-Human-pro-Asp 2(a) delta TM fusion protein"

XX WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000798.

XX 09-MAY-2001; 2001WO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

XX P-PSDB; AAU06612.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl protease 2, lacking Asp2 transmembrane domain and retaining beta secretase activity of Asp2 useful for identifying inhibitors of Asp2 activity.

XX Example 9; Fig 6; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of mammalian aspartyl protease (Asp12) protein which lacks the Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide and the fragment retain the beta-secretase activity of the mammalian Asp2 protein. The invention also details polynucleotides for the Asp proteins and vectors expressing them, and a polypeptide isoform of amyloid protein precursor (APP) comprising the amino acid sequence of an APP or

CC its fragment containing an APP cleavage site recognizable by a mammalian
CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (Abeta) peptide production. APP is also useful in designing
CC therapeutic for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-Sw-beta-secretase peptide sequence (NIDA), which is
CC associated with increased levels of Abeta processing is useful in assays
CC relating the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence encodes T7-human-pro- Asp 2(a) delta
CC TM fusion protein which has a N-terminal T7 tag to aid purification when
CC expressed in E. coli

CC Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11526 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Total length:	264
Percent Similarity:	81.82	Matching Percent Identity:	54.55	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	11
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
158 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 126
```

Sequence name: rmp2ndb:ABL52466

Sequence documentation:

ID ABL52466 standard; cDNA; 1341 BP.

XX ABL52466;

DT 16-UTL-2002 (first entry)

DE T7-human-pro-Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:21.

KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
KW amyloid precursor protein; APP; gene; ss.

OS Homo sapiens.

Key Location/Qualifiers

FT CDS 1..2094

FT /tag= a

FT /product= "T7-human-pro-Asp-2(a)deltaTM"

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99MO-US020881.

PR 06-DEC-1999; 99US-00416901.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Bienkowski MJ, Gurney M;
XX WPI, 2002-397167/43.
DR P-PSDB; ABB78599.

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

PS Example 9; Fig 6; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridizes under stringent conditions to the non
CC -coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52466) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III') comprising a sequence that
CC hybridizes under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78599)); (4) a vector (IV)
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localized to chromosome 21, while
CC hu-Asp2 has been localized to chromosome 11q23.3-24.1. The present
CC sequence encodes human T7-human-pro-Asp-2(a)deltaTM, which is given in an
CC example from the present invention

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52466 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Total length:	264
Percent Similarity:	81.82	Matching Percent Identity:	54.55	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	11
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
158 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 126
```

Sequence name: rmp2ndb:ADJ94333

Sequence documentation:

ID ADJ94333 standard; cDNA; 1341 BP.

XX ADJ94333;

DT 03-JUN-2004 (first entry)

DE Human cDNA encoding T7-human-pro-Asp-2(a)deltaTM.

KM Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta; mutant.

OS Homo sapiens.

XX Synthetic.

XX US6706485-B1.

Sequence name: rngp2ndb:ADR75342

Sequence documentation:

ID ADR75342 standard; DNA; 1341 BP.

AC ADR75342;

DT 18-NOV-2004 (first entry)

DE T7-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; human; gene; de.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1341

FT /tag= a
/product= "T7-Human-pro-Asp-2(a)deltaTM protein"

XX US2004166507-A1.

XX 26-AUG-2004.

XX 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWSKI M J.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2004-624916/60.

XX P-PSDB; ADR75343.

XX Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.

XX Example 9; SEQ ID NO 21; 107pp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridise with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying candidates to modulate the progression of
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX present sequence is the T7-Human-pro-Asp-2(a)deltaTM DNA. This sequence
XX is used to illustrate the method of the invention.

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75342 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 264

Matching length: 11
Total length: 11
Matching Percent Similarity: 81.82
Total Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
158 AAGCTGCCCTCCGCCGCCGCTCTCTCTCTCT 126

Sequence name: rngp2ndb:AAA15688

Sequence documentation:

ID AAA15688 standard; cDNA; 1362 BP.

XX AAA15688;

DT 03-AUG-2000 (first entry)

DE Modified human aspartyl protease 2 (Asp2) nucleotide sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

XX Alzheimer's disease; beta secretase site; ss.

XX Homo sapiens.

XX WO200017369-A2.

XX 30-MAR-2000.

XX 23-SEP-1999; 99WO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2000-303209/26.

XX P-PSDB; AAY88438.

XX New enzyme designated human aspartase useful in research into Alzheimer's
PT disease is capable of cleaving amyloid protein precursor at the beta
PT secretase site to produce amyloid beta peptide.

XX Example 10; Page 168-169; 183pp; English.

XX This sequence represents a modified human aspartyl protease 2 (Asp2)
XX nucleotide sequence. Asp2 encoded by this sequence has the C-terminal
XX transmembrane domain deleted. The invention relates to a protease (e.g.
XX Asp2) capable of cleaving the beta secretase site of amyloid precursor
XX protein (APP). The protease contains a sequence encoding the amino acid
XX sequence DTG and a sequence encoding DSG or DTG separated by 100-300
XX amino acids. When mutated the APP gene causes an autosomal dominant form
XX of Alzheimer's disease. APP localises to the cell surface membrane and
XX have a single C-terminal transmembrane domain. Proteolytic processing of
XX APP produces the amyloid beta protein, which is possibly very important
XX in Alzheimer's disease. The invention includes a nucleotide sequence
XX encoding the protease, a vector containing the nucleotide sequence, and a
XX cell line comprising the vector. Methods for screening for inhibitors of
XX beta secretase activity are also given in the invention. The human
XX aspartase protein and nucleotide sequences and the methods for
XX identifying inhibitors of the protease, are useful in the treatment of
XX and research in to Alzheimer's disease

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15688 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 264

XX (PRAA) PHARMACIA & UPJOHN CO.
PA Bienkowski MJ, Gurney M;
XX WPI; 2001-444208/48.
XX P-PSDB; AAE10642.
XX
PT Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
PS Example 10; Page 130; 187pp; English.
XX
CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
CC are useful for treating Alzheimer's disease (AD) which causes progressive
CC dementia with consequent formation of amyloid plaques, neurofibrillary
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
CC with the substrate under acidic conditions and determining the level of
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
CC human Asp 2(a) protein lacking a transmembrane (TM) domain which is
CC generated by the deletion of the C-terminal TM domain of human Asp 2(a)
CC protein
XX
SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD17878 ..
Alignment segment 1/1: (-)
Matching length: 32.00 Total length: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::||||| 147
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 147
Sequence name: rngp2ndb: AAD13034
Sequence documentation:
ID AAD13034 standard; cDNA; 1362 BP.
XX
AC AAD13034;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human-Asp2(a) delatm protein cDNA.
XX
KW Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
KW neuroprotective; antisense therapy; Asp2(a) delatm protein;
KW gene therapy; ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..1362
FT /tag= a
FT /product= "Human Asp2(a) delatm protein"

FT /transl_except= (pos:640..642, aa:Gln)
XX
XX WO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001MO-IB000799.
XX
XX 09-MAY-2001; 2001MO-IB000799.
XX
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX P-PSDB; AAE06872.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 10; Page 160; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes Human aspartyl protease 2a (Hu-Asp2a)
XX delatm protein which is obtained by the deletion of transmembrane domain
XX at the C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase
XX activity
XX
SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD13034 ..
Alignment segment 1/1: (-)
Matching length: 32.00 Total length: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::||||| 147
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 147
Sequence name: rngp2ndb: AAD06752
Sequence documentation:
ID AAD06752 standard; cDNA; 1362 BP.
XX
AC AAD06752;
XX

DT 10-AUG-2001 (first entry)
 XX Human-Asp-2(a) delta TM protein CDNA.
 DE Human; alpha-secretase; amyloid precursor protein; APP; therapy;
 XX Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
 KM beta-secretase; Asp-2a delta TM; mutant; ss.
 XX Homo sapiens.
 OS Synthetic.
 FT Key Location/Qualifiers
 FT CDS 1..1362
 FT /tag= a
 FT /product= "Human-Asp-2(a) delta TM protein"
 FT /transl_except= (pos:640..642,aa:Gln)
 PN MO200123533-A2.
 XX 05-APR-2001.
 XX 22-SEP-2000; 2000WO-US026080.
 XX 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 XX (PHAA) PHARMACIA & UPJOHN CO.
 PI Gurney M, Bienkowski MJ;
 DR WPI, 2001-290516/30.
 DR P-PSDB; AAE02594.
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
 PT protein, useful for the treatment of Alzheimer's disease.
 XX Example 10; Page 158-159; 189pp; English.
 PS The present invention relates to enzymes for cleaving the alpha-
 CC secretase site of the amyloid precursor protein (APP) and methods of
 CC identifying those enzymes. The methods may be used to identify enzymes
 CC that may be used to cleave the alpha-secretase cleavage site of the APP
 CC protein. The enzymes may be used to treat or modulate the progress of
 CC Alzheimer's disease. The present sequence is a cDNA encoding human
 CC Aspartyl protease 2a (Asp-2a) deltaTM protein which is obtained by
 CC deleting its transmembrane domain. This sequence has beta-secretase
 CC protease activity
 XX SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD06752 ..
 Alignment segment 1/1: (-)
 Matching length: 32.00
 Matching Percent Similarity: 81.82
 Total Percent Similarity: 81.82
 Gaps: 0
 Matching length: 264
 Matching Percent Identity: 11
 Total Percent Identity: 54.55
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
 179 AAGCTGCGCCCTCGGCGCGGCTCTCGGCTCT 147
 Sequence name: rmgp2ndb:AA511530
 Sequence documentation:
 ID AA511530 standard; cDNA; 1362 BP.
 XX

AC AA511530;
 XX 24-OCT-2001 (first entry)
 DE Human cDNA encoding Human-pro-Asp 2(a) delta TM.
 XX Human; Aspartyl protease; beta-secretase; neurotrophic; ASP2;
 KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
 KM amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM; ss; mutant.
 XX Homo sapiens.
 OS Synthetic.
 FT Key Location/Qualifiers
 FT CDS 1..1362
 FT /tag= a
 FT /product= "Human-pro-Asp 2(a) delta TM"
 FT /transl_except= (pos:639..642,aa:Gln)
 FT sig_peptide 1..63
 FT /tag= b
 FT mat_peptide 64..1359
 FT /tag= c
 FT /label= Mature_Human_pro_Asp_2(a)_delta_TM
 PN MO200149098-A2.
 XX 12-JUL-2001.
 XX 09-MAY-2001; 2001WO-IB000798.
 XX 09-MAY-2001; 2001WO-IB000798.
 XX (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRIKSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 PI WPI, 2001-502549/55.
 DR P-PSDB; AAU06616.
 XX Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX Example 10; Page 160; 185pp; English.
 PS The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutic peptides for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLND), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes Human-pro-Asp 2(a) delta TM

CC protein, which lacks the C-terminal transmembrane domain
XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11530 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Total length:	264
Matching	Percent Similarity:	81.82	Matching	Percent Identity:	54.55
Total	Percent Similarity:	81.82	Total	Percent Identity:	54.55
Gaps:		0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCTCT      147
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Sequence name: rngp2ndb.ABL52470

Sequence documentation:

ID ABL52470 standard; cDNA; 1362 BP.

AC ABL52470;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:29.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KM chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

OS

PH Key Location/Qualifiers

FT CDS

1..1362

/product= "Human Asp-2(a)delta TM"

/transl_except= (pos:640..642,aa:Gln)

XX GB2367060-A.

XX 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

PA Bienenkowi MJ, Gurney M;

PI WPI; 2002-397167/43.

DR P-PSDB; ABB78603.

XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl

PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 10; Page 130; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)

CC substrate (I) which comprises a peptide of no more than 50 amino acids,

CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-

CC Glu-Pro. Also described are: (i) a method (ii) for assaying hu-Asp1

CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with

CC (1) under acidic conditions; and (b) determining the level of hu-Asp1

CC proteolytic activity; (2) a purified polynucleotide (iii) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non
CC -coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (iii') comprising a sequence that
CC hybridises under stringent conditions to (iii) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (iv)
CC comprising (iii) or (iii'); and (5) a host cell (v) transformed or
CC transfected with (iii), (iii') and/or (iv). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (ii) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence encodes human Asp-2(a)deltaTM, which is given in an example from
CC the present invention

Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52470 ..

	Quality:	32.00		Total length:	264
Matching	Percent Similarity:	81.82	Matching	Percent Identity:	54.55
Total	Percent Similarity:	81.82	Total	Percent Identity:	54.55
Gaps:		0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCTCT      147
```

Sequence name: rngp2ndb.ADJ94341

Sequence documentation:

ID ADJ94341 standard; cDNA; 1362 BP.

AC ADJ94341;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(a)deltaTM cDNA.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

KM neurotrophic; neuroprotective; amyloid beta; mutant.

XX Homo sapiens.

OS Synthetic.

XX US6706485-B1.

PN 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PA Gurney ME, Bienenkowski MJ, Heinrichson RU, Parodi LA, Yan R;

PI WPI; 2004-236722/22.

DR P-PSDB; ADJ94342.

XX Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.

XX Example 10; SEQ ID NO 29; 108pp; English.

XX The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminal amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NT, designated e.g. APP695-Sw
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94341 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82		54.55	
Total Percent Similarity:	81.82		54.55	
Gaps:	0			
Total Percent Identity:			54.55	

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCTCT      147

```

Sequence name: rnp2ndb:AD050437

Sequence documentation:

ID AD050437 standard; DNA; 1362 BP.

XX AC AD050437;

XX DT 29-JUL-2004 (first entry)

XX DE Human Asp-2(a)deltaTM mutant DNA.

XX KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

XX KW Alzheimer's disease; gene therapy; human; gene; mutant; de.

XX OS Homo sapiens.

XX OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1362

FT /tag= a /product= "Human Asp-2(a)deltaTM mutant protein"

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99US-0020681.

XX 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

XX P-PSDB; AD050438.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

XX involved in processing amyloid precursor protein into amyloid beta,

XX useful in preparing a composition for treating or preventing Alzheimer's

XX disease.

XX Example 10; SEQ ID NO 29; 108pp; English.

XX The invention relates to a method for identifying an agent that decreases

XX the protease activity of the aspartyl protease (Asp) polypeptide. It also

XX provides enzyme and enzymatic procedures for cleaving the beta secretase

XX cleavage site of the amyloid precursor protein (APP). The invention is

XX useful in preparing a composition for treating or preventing Alzheimer's

XX disease. It is also useful in gene therapy. The present sequence is human

XX Asp-2(a)deltaTM mutant DNA. This sequence is used to illustrate the

XX method of the invention.

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050437 ..

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82		54.55	
Total Percent Similarity:	81.82		54.55	
Gaps:	0			
Total Percent Identity:			54.55	

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCTCT      147

```

Sequence name: rnp2ndb:ADR75350

Sequence documentation:

ID ADR75350 standard; DNA; 1362 BP.

XX AC ADR75350;

XX DT 18-NOV-2004 (first entry)

XX DE Human Asp-2(a)deltaTM mutant DNA.

XX KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

XX KW chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

XX OS Homo sapiens.

```

OS Synthetic.
XX Key Location/Qualifiers
XX CDS 1..1362
FT /tag= a
FT /product= "Human Asp-2(a)deltaTM mutant protein"
FT /transl_except= (pos:640..642, aa:Gln)
XX
XX US2004166507-A1.
XX
XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 13-OCT-1999; 99US-00416901.
XX
XX (GURNEY/) GURNEY M E.
XX (BIEN/) BIENKOWAKI M J.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
XX MPI, 2004-624916/60.
XX P-PSDB; ADR75351.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
XX aspartyl protease activity involved in processing amyloid precursor
XX protein into amyloid beta, useful in identifying agent decreasing
XX activity of aspartyl protease.
XX
XX Example 10; SEQ ID NO 29; 107pp; English.
XX
XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridize with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying candidates to modulate the progression of
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX present sequence is the human Asp-2(a)deltaTM mutant DNA. This sequence
XX is used to illustrate the method of the invention.
XX
XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADR75350 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Quality: 32.00
XX Matching Length: 11
XX Matching Percent Similarity: 81.82
XX Total Length: 264
XX Total Percent Identity: 54.55
XX Gaps: 0
XX
XX Alignment:
XX
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX :::::::::::::::::::::
XX 179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 147
XX
XX Sequence name: rngp2ndb:ADJ57772
XX
XX Sequence documentation:
XX ID ADJ57772 standard; DNA; 1368 BP.

```

```

XX AC ADJ57772;
XX DT 06-MAY-2004 (first entry)
XX
XX DNA sequence for BACE WT.
XX
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX Alzheimer's disease; ds.
XX
XX Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1368
XX /tag= a
XX /product= "BACE protein"
XX
XX WQ2004011641-A2.
XX
XX 05-FEB-2004.
XX
XX 25-JUL-2003; 2003WO-GB003200.
XX
XX 26-JUL-2002; 2002US-0398681P.
XX
XX (ASTE-) ASTEX TECHNOLOGY LTD.
XX
XX Vuillard LMN, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX MPI, 2004-169242/16.
XX P-PSDB; ADJ57773.
XX
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
XX preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX syndrome.
XX
XX Disclosure; SEQ ID NO 1; 145pp; English.
XX
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
XX protein. The compound or the composition is useful in medicine and the
XX BACE crystal structure is useful for drug discovery. The BACE protein,
XX compounds, pharmaceutical compositions, medicament, drug or other
XX composition comprising the compound is useful for treating or preventing
XX Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
XX present sequence represents the DNA sequence for a BACE encoding
XX sequence.
XX
XX Sequence 1368 BP; 292 A; 393 C; 400 G; 283 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADJ57772 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Quality: 32.00
XX Matching Length: 11
XX Matching Percent Similarity: 81.82
XX Total Length: 264
XX Total Percent Identity: 54.55
XX Gaps: 0
XX
XX Alignment:
XX
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX :::::::::::::::::::::
XX 185 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 153
XX
XX Sequence name: rngp2ndb:ACC84850
XX
XX Sequence documentation:
XX ID ACC84850 standard; DNA; 1371 BP.
XX
XX ACC84850;
XX
XX 12-SEP-2003 (first entry)

```


DT 15-SEP-2003 (revised)
 DT 06-AUG-2003 (revised)
 DT 03-AUG-2000 (first entry)
 DE T7-caspase-human-pro-Asp-2(a)-deltaTM nucleotide sequence.
 XX
 KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; ss;
 KM Alzheimer's disease; beta secretase site;
 KM T7-caspase-human-pro-Asp-2(a)-deltaTM.
 XX
 OS Homo sapiens.
 OS Enterobacteria phage T7.
 OS Chimeric.
 XX
 PN W0200017369-A2.
 XX
 PD 30-MAR-2000.
 XX
 PF 23-SEP-1999; 99WO-US020881.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2000-303209/26.
 PT P-PSDB; AA068432.
 PT
 PT New enzyme designated human aspartase useful in research into Alzheimer's
 PT Disease is capable of cleaving amyloid protein precursor at the beta
 PT secretase site to produce amyloid beta peptide.
 XX
 XX
 PS Example 9; Fig 7; 183pp; English.
 CC
 CC This sequence represents a modified version of the human aspartase 2
 CC (Asp2) nucleotide sequence. The sequence is used in the bacterial
 CC expression of human Asp2L. The invention relates to a protease (e.g.
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
 CC protein (APP). The protease contains a sequence encoding the amino acid
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
 CC amino acids. When mutated the APP gene causes an autosomal dominant form
 CC of Alzheimer's disease. APP localises to the cell surface membrane and
 CC have a single C-terminal transmembrane domain. Proteolytic processing of
 CC APP produces the amyloid beta protein, which is possibly very important
 CC in Alzheimer's disease. The invention includes a nucleotide sequence
 CC encoding the protease, a vector containing the nucleotide sequence, and a
 CC cell line comprising the vector. Methods for screening for inhibitors of
 CC beta secretase activity are also given in the invention. The human
 CC aspartase protein and nucleotide sequences and the methods for
 CC identifying inhibitors of the protease, are useful in the treatment of
 CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to
 CC correct OS field.) (Updated on 15-SEP-2003 to standardise OS field)
 CC
 XX
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAA15669 ..
 Alignment segment 1/1: (-)
 Matching length: 32.00
 Matching Percent Similarity: 81.82
 Total length: 264
 Total Percent Similarity: 81.82
 Total Percent Identity: 54.55
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
 ::::::::::::::::::::: 165
 197 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT
 Sequence name: rngp2ndb:MAS11712

Sequence documentation:
 ID MAS11712 standard; DNA; 1380 BP.
 XX
 AC MAS11712;
 XX
 DT 11-SEP-2003 (revised)
 DT 24-OCT-2001 (first entry)
 XX
 DE DNA encoding T7-caspase-human aspartyl protease 2a deltaTM.
 XX
 KM Human; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;
 KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;
 KM beta-secretase; Alzheimer's disease; ds; T7-caspase-HuAsp-2adeltaTM.
 XX
 OS Homo sapiens.
 OS Enterobacteria phage T7.
 XX
 FH Key Location/Qualifiers
 FT CDS 1..1380
 FT /*tag= a
 FT /product= "T7-caspase-Aspartyl protease-2a delta TM"
 FT sig_peptide 1..81
 FT /*tag= b
 FT mat_peptide 82..1377
 FT /*tag= c
 FT /note= "Mature T7-caspase-aspartyl protease-2a delta TM"
 FT
 XX
 PN W0200149097-A2.
 XX
 PD 12-JUL-2001.
 XX
 PF 09-MAY-2001; 2001WO-IB000797.
 XX
 PR 09-MAY-2001; 2001WO-IB000797.
 XX
 PA (BIEN/) BIENKOWSKI M J.
 PA (GURN/) GURNEY M E.
 PA (HEIN/) HEINRICHSON R L.
 PA (PARO/) PARODI L A.
 PA (YANR/) YAN R.
 XX
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 DR WPI; 2001-502548/55.
 DR P-PSDB; AA007212.
 DR
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX
 PS Example 9; Fig 7; 185pp; English.
 XX
 CC The invention relates to a novel purified polypeptide comprising a
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl termini of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
 CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta
 CC (Abeta) peptide production, for use in designing therapeutics for the
 CC treatment or prevention of Alzheimer's disease. Probes and primers
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The

CC present sequence represents the coding sequence of T7-caspase-human-Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader sequence and lacks the transmembrane domain. This construct was used for bacterial expression and purification of human Asp2a. (Updated on 11-SEP-2003 to standardise OS field)

SO Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11712 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||:::|:::|:::|:::|:::|:::|
197 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 165

```

Sequence name: rngp2ndb:AAS11716

Sequence documentation:
ID AAS11716 standard; DNA; 1380 BP.

AC AAS11716;

DT 09-SEP-2004 (revised)

DT 24-OCT-2001 (first entry)

DE DNA encoding human aspartyl protease 2a deltaTM (His)6.

XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KM beta-secretase; Alzheimer's disease; de; huAsp-2adeltaTM (His)6.

OS Homo sapiens.

OS Unidentified.

FT Key Location/Qualifiers

FT CDS 1..1380

FT /tag= b

FT /product= "Human Aspartyl protease-2a delta TM (His)6"

FT /transl_except= (pos:1360..1362, aa:His)

FT /transl_except= (pos:1363..1365, aa:His)

FT /transl_except= (pos:1366..1368, aa:His)

FT /transl_except= (pos:1367..1371, aa:His)

FT /transl_except= (pos:1372..1374, aa:His)

FT /transl_except= (pos:1375..1377, aa:His)

FT sig_peptide 1..63

FT /tag= a

FT mat_peptide 64..1377

FT /tag= C

FT /note= "Mature human aspartyl protease 2a deltaTM"

XX MO200149097-A2.

XX 12-JUL-2001.

XX PD 09-MAY-2001; 2001WO-IB000797.

XX PR 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502548/55.

DR P-PSDB; AA007216.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Example 10; Page 162; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a

CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the

CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide

CC and the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. Also included is an isoform of amyloid protein precursor (APP)

CC comprising the amino acid sequence of a APP or its fragment containing an

CC APP cleavage site recognizable by a mammalian beta-secretase, and further

CC comprising two lysine residues at the carboxyl terminus of the amino acid

CC sequence of the mammalian APP or APP fragment. The polypeptides are used

CC for assaying for modulators of beta-secretase activity; identifying

CC agents that inhibit the APP processing activity of human Asp2 aspartyl

CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2

CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.

CC Agents identified by the above methods are useful for treating

CC Alzheimer's disease; and for identifying modulators of amyloid beta

CC (Abeta) peptide production, for use in designing therapeutics for the

CC treatment or prevention of Alzheimer's disease. Probes and primers

CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp

CC nucleic acids in in vitro assays and in Northern and Southern blots. The

CC present sequence represents the coding sequence of human Asp-2a delta TM

CC (His)6 construct which has a 6 histidine tag and lacks the transmembrane

CC domain. This construct was used for expression and purification of human

CC Asp2a in insect cells

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

Alignment of: us-10-726-967a-1 x AAS11716 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||:::|:::|:::|:::|:::|:::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT 147

```

Sequence name: rngp2ndb:AA017879

Sequence documentation:
ID AA017879 standard; cDNA; 1380 BP.

XX AA017879;

XX 10-DEC-2001 (first entry)

XX Human-Asp 2(a) lacking TM domain (His)6 protein encoding cDNA.

XX Human; aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;

XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

XX amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;

XX se.

XX

XX

XX

XX

XX

XX

XX

```
OS Synthetic.
XX Key Location/Qualifiers
FH CDS 1..1380
FT /*tag= a
FT /product= "Human-Asp 2(a) lacking transmembrane domain
FT (His) 6 protein"
FT /transl_except= (pos:640..642, aa:Gln)
FT /transl_except= (pos:1360..1362, aa:His)
FT /transl_except= (pos:1363..1365, aa:His)
FT /transl_except= (pos:1366..1368, aa:His)
FT /transl_except= (pos:1369..1371, aa:His)
FT /transl_except= (pos:1372..1374, aa:His)
FT /transl_except= (pos:1375..1377, aa:His)
XX GB2357767-A.
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Bienkowskei MJ, Gurney M;
XX WPI; 2001-444208/48.
XX P-PSDB; AAE10643.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 10; Page 132; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
XX human Asp 2(a) lacking a transmembrane (TM) domain (his)6 protein which
XX is generated from human Asp 2(a) protein by the deletion of its C-
XX terminal TM domain and addition of hexa-histidine tag at its C-terminus
XX
XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD17875 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Quality: 32.00
XX Matching length: 11
XX Matching Percent Similarity: 81.82
XX Total length: 264
XX Total Percent Similarity: 81.82
XX Total Percent Identity: 54.55
XX Gaps: 0
XX
XX Alignment:
XX
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX ::::::::::::::::::::
XX ::::::::::::::::::::
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179 AAGTCGCCCTCCGCGCGGCTCCTCGGCTCT
Sequence name: rngp2ndb: AAD17875
ID AAD17875 standard; cDNA; 1380 BP.
XX
XX AAD17875;
XX
XX 10-DEC-2001 (first entry)
XX
XX T7-Caspase-human-pro-Asp 2(a) protein lacking TM domain encoding cDNA.
XX
XX Human: aspartyl protease 1; Asp1; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neuroprotective;
XX T7-Caspase-human-pro-Asp 2(a) protein; ss.
XX
XX Homo sapiens.
XX
XX Synthetic.
XX
XX Key Location/Qualifiers
FH CDS 1..1380
FT /*tag= a
FT /product= "T7-Caspase-human-pro-Asp 2(a) protein lacking
FT transmembrane domain"
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Bienkowskei MJ, Gurney M;
XX WPI; 2001-444208/48.
XX P-PSDB; AAE10639.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 9; Fig 7; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
XX human T7-Caspase-human-pro-Asp 2(a) protein lacking a transmembrane (TM)
XX domain. T7-Caspase-human-pro-Asp 2(a) protein is generated from human Asp
XX 2(a) protein by the addition of a T7 tag and caspase 8 leader sequence at
XX its N-terminal end and the deletion of its C-terminal TM domain
XX
XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD17875 ..
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Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||:::|||||
197 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGCTCT

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Sequence name: rngp2ndb: AAD13035

Sequence documentation:

ID AAD13035 standard; cDNA; 1380 BP.

AC AAD13035;

DT 23-OCT-2001 (first entry)

DE Human-Asp2(a) deltatm (His)6 protein cDNA.

Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP; beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis; neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic; neuroprotective; antisense therapy; Asp2(a) deltatm (His)6 protein; gene therapy; ss.

OS Homo sapiens.

XX Synthetic.

Key	Location/Qualifiers
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FH 1. 1380

/*tag= a	/product= "Human Asp2(a) deltatm (His)6 protein"
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/transl_except= (pos:640..642, aa:Gln)	
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/transl_except= (pos:1360..1362, aa:His)	
--	--

/transl_except= (pos:1363..1365, aa:His)	
--	--

/transl_except= (pos:1366..1368, aa:His)	
--	--

/transl_except= (pos:1369..1371, aa:His)	
--	--

/transl_except= (pos:1372..1374, aa:His)	
--	--

/transl_except= (pos:1375..1377, aa:His)	
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1. 65	
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/*tag= d	/note= "Encodes N-terminal 1-21 amino acids of human Asp2(a) deltatm (His)6 protein"
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66. 90	
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/*tag= b	
----------	--

91. 1377	
----------	--

/*tag= c	/product= "Mature human Asp2(a) deltatm (His)6 protein"
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mat_peptide	
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sig_peptide	
-------------	--

misc_feature	
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WO200150829-A2.	
-----------------	--

19-JUL-2001.	
--------------	--

09-MAY-2001; 2001WO-IB000799.	
-------------------------------	--

09-MAY-2001; 2001WO-IB000799.	
-------------------------------	--

PA (BIEN/) BIENKOWSKI M J.	
----------------------------	--

PA (GURN/) GURNEY M E.	
------------------------	--

PA (HEIN/) HEINRIKSON R L.	
----------------------------	--

PA (PARO/) PARODI L A.	
------------------------	--

PA (YANR/) YAN R.	
-------------------	--

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;	
--	--

XX WPI, 2001-463072/52.	
-------------------------	--

DR P-PSDB; AAE06873.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Example 10; Page 162; 185pp; English.

PS The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid

XX precursor protein (APP) isoforms and their corresponding DNA molecules.

CC Human aspartyl proteases can act as beta-secretase proteases useful for

CC treating Alzheimer's disease. APP isoforms are useful for identifying

CC modulators of amyloid-beta peptide production, for use in designing

CC therapeutics for the treatment and prevention of Alzheimer's disease,

CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis

CC and neuronal loss. APP isoforms are also used in methods for identifying

CC inhibitors and modulators of human Asp2 activity. The invention relates

CC to a method for identifying agents that modulate the activity of human

CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used

CC as a means to screen in cellular assays for the inhibitors of beta- and

CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in

CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-

CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.

CC The present cDNA sequence encodes human aspartyl protease 2a (Hu-Asp2a)

CC deltatm (His)6 protein which is obtained by the deletion of C-terminal

CC transmembrane domain and addition of a hexa-histidine tag at the C-

CC terminal end of Hu-Asp2a. Human Asp2a has beta-secretase activity

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13035 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGCTCT

```

Sequence name: rngp2ndb: AAD13031

Sequence documentation:

ID AAD13031 standard; cDNA; 1380 BP.

AC AAD13031;

DT 23-OCT-2001 (first entry)

DE T7-Caspase-Human-pro-Asp2(a) deltatm protein cDNA.

XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;

XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;

XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;

XX neuroprotective; antisense therapy; caspase-pro-Asp2(a) deltatm protein;

XX gene therapy; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

/*tag= a	/product= "T7-Caspase-Human-pro-Asp2(a) deltatm protein"
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1. 1380	
---------	--

CDS	
-----	--

WO200150829-A2.	
-----------------	--

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XX 19-JUL-2001.
PD 09-MAY-2001; 2001MO-IB000799.
XX 09-MAY-2001; 2001MO-IB000799.
XX 09-MAY-2001; 2001MO-IB000799.
XX (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-463072/52.
DR P-PSDB; AAE06869.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 7; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC APP nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present cDNA sequence encodes T7-caspase-human-pro-aspartyl protease
CC 2a (Asp2a) deltatm protein which is obtained by the addition of T7 tag
CC and caspase 8 leader sequence at the N-terminal end and deletion of
CC transmembrane domain at the C-terminal end of Hu-Asp2a. Human Asp2a has
CC beta-secretase activity
XX
XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAD13031 ..
Alignment segment 1/1: (-)
Matching length: 32.00
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0
Score: 264
Total length: 11
Matching length: 11
Matching Percent Identity: 54.55
Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
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197 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 165
Sequence name: rnp2ndb:AA06749
Sequence documentation:
ID AAD06749 standard; cDNA; 1380 BP.
XX
XX AAD06749;
XX
XX 10-AUG-2001 (first entry)
XX

```

```

DE T7-Caspase-human-pro-Asp-2(a) delta TM protein cDNA.
XX
XX Human: alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; caspase-Asp-2a delta TM; ss.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
FT CDS 1..1380
FT /tag= a
FT /product= "T7-Caspase-human-pro-Asp-2(a) delta TM
FT protein"
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000MO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-290516/30.
XX P-PSDB; AAE02591.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 9; Fig 7; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is a cDNA encoding human
CC Aspartyl protease 2a (Asp 2a) caspase deltatm protein which is obtained
CC by deleting the transmembrane domain and adding a T7-caspase leader
CC sequence at the N-terminal end. This sequence has beta-secretase protease
CC activity
XX
XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06749 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Matching length: 32.00
XX Matching Percent Similarity: 81.82
XX Total Percent Identity: 54.55
XX Total Percent Similarity: 81.82
XX Gaps: 0
XX
XX Score: 264
XX Total length: 11
XX Matching length: 11
XX Matching Percent Identity: 54.55
XX Total Percent Identity: 54.55
XX
XX Alignment:
XX 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
XX :::|||||:::|:::|:::|
XX 197 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 165
XX
XX Sequence name: rnp2ndb:AA06753
XX
XX Sequence documentation:
XX ID AAD06753 standard; cDNA; 1380 BP.
XX
XX AAD06753;
XX

```

```

XX 10-AUG-2001 (first entry)
XX
XX Human-Asp-2(a) deltatm (His) 6 protein cDNA.
XX
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; Asp-2a deltatm; histidine tag; mutant; ss.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1383
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XX /tag= a
XX /product= "Human-Asp-2(a) deltatm (His) 6 protein"
XX /transl_except= (pos:640..642, aa:Gln)
XX /transl_except= (pos:1360..1362, aa:His)
XX /transl_except= (pos:1363..1365, aa:His)
XX /transl_except= (pos:1366..1368, aa:His)
XX /transl_except= (pos:1369..1371, aa:His)
XX /transl_except= (pos:1372..1374, aa:His)
XX /transl_except= (pos:1375..1377, aa:His)
XX
XX W0200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowiak MJ;
XX
XX WPI; 2001-290516/30.
XX P-PSDB; AA025595.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 10; Page 160-161; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is a cDNA encoding human
XX aspartyl protease 2a (Asp 2a) deltatm (His)6 protein which is obtained by
XX deleting the transmembrane domain and adding a histidine tag at the C-
XX terminal end. This sequence has beta-secretase protease activity
XX
XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06753
XX
XX Alignment segment 1/1: (-)
XX
XX Quality: 32.00
XX Matching length: 11
XX Matching Percent Similarity: 81.82
XX Total length: 264
XX Total Percent Identity: 54.55
XX Gaps: 0
XX Total Percent Identity: 54.55
XX
XX Alignment:
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyala 37
XX ::::::::::::::::::::
XX ::::::::::::::::::::

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179 AAGCTGCCCCCGGCGGCTCTCGGCTCT
Sequence name: rngp2ndb.AA511531
147
ID AA511531 standard; cDNA; 1380 BP.
XX
XX AA511531;
XX
XX 24-OCT-2001 (first entry)
XX
XX Human cDNA encoding Human-pro-Asp 2(a) delta TM (His)6.
XX
XX Human; Aspartyl protease; beta-secretase; neurotropic; ASP2;
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
XX amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM (His)6; ss; mutant.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1380
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XX /tag= a
XX /product= "Human-pro-Asp 2(a) delta TM (His)6"
XX /transl_except= (pos:639..642, aa:Gln)
XX /transl_except= (pos:1360..1376, aa:His-His-His-His-His-
XX His)
XX
XX sig_peptide 1..63
XX
XX /tag= b
XX mat_peptide 64..1377
XX
XX /tag= c
XX /label= Mature_Human_pro_Asp_2(a)_delta_TM_(His)6
XX
XX W0200149098-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI; 2001-502549/55.
XX P-PSDB; AA006617.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 10; Page 162; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the Asp proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP)) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-

```

CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridise to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes Human-pro-Asp 2(a) delta TM
 CC protein, which lacks the C-terminal transmembrane domain and has a His
 CC tag to aid purification

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: ua-10-726-967a-1 x AAS11531 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT      147

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Sequence name: rngp2nb:AAS11527

Sequence documentation:

ID AAS11527 standard; cDNA; 1380 BP.

AC AAS11527;

DT 24-OCT-2001 (first entry)

DE Human T7-Caspase-Human-pro-Asp 2(a) delta TM fusion protein cDNA.

XX Human; Aspartyl protease; beta-secretase; nootropic; ASP2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

KW amyloid-beta; Abeta; T7-Caspase-Human-pro-Asp 2(a) delta TM; ss.

OS Homo sapiens.

OS Synthetic.

Key Location/Qualifiers

FT CDS

FT sig_peptide

FT mat_peptide

FT WO200149098-A2.

PD 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000798.

PR 09-MAY-2001; 2001MO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

XX (YANK/) YAN R.

PI Bienkowi MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX WPI, 2001-502549/55.
 DR P-PsDB; AA006613.
 XX

PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.

PS Example 9; Fig 7; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of
 CC mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and
 CC the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. The invention also details polynucleotides for the Asp proteins
 CC and vectors expressing them, and a polypeptide (isoform of amyloid
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or
 CC its fragment containing an APP cleavage site recognizable by a mammalian
 CC beta-secretase, and further comprising two lysine residues at the
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
 CC fragment. Also included in the invention are methods of identifying
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
 CC useful for treating Alzheimer's disease. APP is useful in methods for
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
 CC beta (Abeta) peptide production. APP is also useful in designing
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
 CC associated with increased levels of Abeta processing is useful in assays
 CC relating the Alzheimer's research. The expression vector is useful for
 CC recombinantly expressing APP. Nucleic acids that hybridise to Asp
 CC oligonucleotides are useful as probes or primers. The probes are useful
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
 CC Southern blots. The present sequence encodes T7-Caspase- Human-pro-Asp
 CC 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid
 CC purification when expressed in E. coli and a Caspase leader sequence
 XX

Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: ua-10-726-967a-1 x AAS11527 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
197 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT      165

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Sequence name: rngp2nb:ABL52471

Sequence documentation:

ID ABL52471 standard; cDNA; 1380 BP.

AC ABL52471;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(a)deltaTM(His)6 nucleotide sequence SEQ ID NO:31.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KW chromosome 11q23.3-24.1; gene; ss.

OS Homo sapiens.

OS Key

XX Location/Qualifiers

FT CDS 1..1380
 FT /*tag= a
 FT /product= "Human Asp-2(a)deltaTM(His)6"
 FT /transl_except= (pos:640..642,aa:Gln)
 FT /transl_except= (pos:1360..1362,aa:His)
 FT /transl_except= (pos:1363..1365,aa:His)
 FT /transl_except= (pos:1366..1368,aa:His)
 FT /transl_except= (pos:1369..1371,aa:His)
 FT /transl_except= (pos:1372..1374,aa:His)
 FT /transl_except= (pos:1375..1377,aa:His)
 FT GB2367060-A.
 XX
 XX 27-MAR-2002.
 PD
 XX
 XX 29-OCT-2001; 2001GB-00025934.
 PF
 XX 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99MO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 PR 22-SEP-2000; 2000GB-00023315.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 PI Bienkowski MJ, Gurney M;
 PI WPI; 2002-397167/43.
 DR P-PSDB; ABB78604.
 DR
 XX
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
 PS
 XX Example 10; Page 132; 182pp; English.
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (I) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 CC comprising (III) or (III') and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes human Asp-2(a)deltaTM(His)6, which is given in an
 CC example from the present invention
 XX
 SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ABL52471 ..
 Alignment segment 1/1: (-)
 Matching Length: 32.00
 Matching Percent Similarity: 81.82
 Total Percent Similarity: 81.82
 Gaps: 0
 Total Length: 264
 Matching Percent Identity: 54.55
 Total Percent Identity: 54.55

Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
 179 AAGCGCCCTCCGCGCGGCTCCGCGCTCT 147
 Sequence name: rngp2ndb:ABL52467
 Sequence documentation:
 ID ABL52467 standard; cDNA; 1380 BP.
 AC ABL52467;
 XX
 XX 16-JUL-2002 (first entry)
 DT
 XX
 XX T7-caspase-human-pro-Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:23.
 DE
 XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
 KM amyloid precursor protein; APP; gene; ss.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT 1..1380
 FT CDS /*tag= a
 FT /product= "T7-caspase-human-pro-Asp-2(a)deltaTM"
 FT
 XX
 XX GB2367060-A.
 XX
 XX 27-MAR-2002.
 PD
 XX
 XX 29-OCT-2001; 2001GB-00025934.
 PF
 XX 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99MO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 PR 06-DEC-1999; 99US-0169232P.
 PR 22-SEP-2000; 2000GB-00023315.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 PI Bienkowski MJ, Gurney M;
 PI WPI; 2002-397167/43.
 DR P-PSDB; ABB78600.
 DR
 XX
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
 PS
 XX Example 9; Fig 7; 182pp; English.
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (I) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 CC comprising (III) or (III') and (5) a host cell (V) transformed or
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
 CC substrate (I) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while

CC hu-Ap2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence encodes human T7-caspase-human-pro-Ap2(a)deltaTM, which is
CC given in an example from the present invention

XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52467 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
197 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT      165
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Sequence name: rng2ndb:ADJ94343

Sequence documentation:

ID ADJ94343 standard; cDNA; 1380 BP.

XX ADJ94343;

DT 03-JUN-2004 (first entry)

XX Human-pro-Ap2(a)deltaTM(His)6 cDNA.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KW beta secretase; amyloid protein precursor; App; Alzheimer's disease;

KM neurotrophic; neuroprotective; amyloid beta; mutant.

XX Homo sapiens.

OS Synthetic.

XX US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Farodi LA, Yan R;

XX P-PSDB; ADJ94344.

XX MPI: 2004-236722/22.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

XX useful for treating or preventing Alzheimer's disease involves comparing

XX APP processing activity of protease in presence and absence of test

XX agent.

XX Example 10; SEQ ID NO 31; 109pp; English.

XX The invention relates to identifying agents that modulate activity of

XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

XX precursor protein (App) in the presence and absence of a test agent,

XX where Asp2 is a recombinant polypeptide and processes App into amyloid

XX beta, determining App processing activity of Asp2 in presence and absence

XX of the test agent, and comparing the activities to identify agents that

CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins

CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the

CC nucleic acid encoding hu-Ap2 protease sequence, a host cell comprising

CC the vector and the method of producing hu-Ap polypeptide, an isolated

CC antibody that specifically binds to hu-Ap polypeptide, identifying a

CC cell that can be used to screen for inhibitors of beta secretase

CC activity, novel isoforms of amyloid protein precursor (App), where the

CC last 2 carboxy terminus amino acids of that isoform are both lysine

CC residues (e.g. those designated APP695-KK or carrying the Swedish

CC mutation where KM at 595-596 is mutated to NH, designated e.g. APP635-SW

CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful

CC for assaying for beta secretase activity and screening for inhibitors of

CC beta-secretase) and polynucleotides that encode the App proteins. The

CC method is useful for identifying agents that modulate the activity

CC (amyloid precursor protein processing activity) of Asp2 aspartyl

CC protease. Preferably, the method is useful for identifying agents that

CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid

CC precursor protein processing, are useful for treating or preventing

CC Alzheimer's disease. The present sequence encodes an aspartyl protease

CC mutant construct (e.g. lacking a transmembrane domain and/or including a

CC caspase cleavage site) used to investigate the cleavage activity of Asp2

XX protein.

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94343 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT      147
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Sequence name: rng2ndb:ADJ94335

Sequence documentation:

ID ADJ94335 standard; cDNA; 1380 BP.

XX ADJ94335;

DT 03-JUN-2004 (first entry)

XX Human T7-Caspase-human-pro-Ap2(a)deltaTM cDNA.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KW beta secretase; amyloid protein precursor; App; Alzheimer's disease;

KM neurotrophic; neuroprotective; amyloid beta; mutant.

XX Homo sapiens.

OS Synthetic.

XX US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
 XX WPI: 2004-236722/22.
 DR P-PSDB; ADJ94336.
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 PT agent.
 XX
 PS Example 9; SEQ ID NO 23; 109pp; English.
 XX
 CC The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy termini amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2
 CC proteins.
 XX
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADJ94335 ..
 Alignment segment 1/1: (-)
 Quality: 32.00 Score: 264
 Matching length: 11 Total length: 11
 Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
 ::::|||||:|||||:|||||:|||||:|||||: ::::|||||:|||||:|||||:|||||:|||||:
 197 MAGCTGCCCTCCGCGCGGCTCTCGGCTCT 165
 Sequence name: rngp2ndb:AD050431
 Sequence documentation:
 ID AD050431 standard; DNA, 1380 BP.
 XX
 AC AD050431;
 XX
 DT 29-JUL-2004 (first entry)
 XX
 XX 77-Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA.
 XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
 KW Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.

XX Homo sapiens.
 OS Chimeric.
 OS Unidentified.
 OS
 XX
 FH Key Location/Qualifiers
 FT CDS 1. 1380
 FT /*tag= a
 FT /product= "T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric
 FT protein"
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 XX US6737510-B1.
 XX
 XX 18-MAY-2004.
 XX
 PD 12-APR-2000; 2000US-00548373.
 XX
 PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 99US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-05020881.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PRAA) PHARMACIA & UPJOHN CO.
 XX
 PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
 XX WPI: 2004-387112/36.
 DR P-PSDB; AD050432.
 XX
 PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
 PT involved in processing amyloid precursor protein into amyloid beta.
 PT useful in preparing a composition for treating or preventing Alzheimer's
 PT disease.
 XX
 XX Example 9; SEQ ID NO 23; 109pp; English.
 XX
 PS The invention relates to a method for identifying an agent that decreases
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase
 CC cleavage site of the amyloid precursor protein (APP). The invention is
 CC useful in preparing a composition for treating or preventing Alzheimer's
 CC disease. It is also useful in gene therapy. The present sequence is T7-
 CC Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA. This sequence is used to
 CC illustrate the method of the invention.
 XX
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AD050431 ..
 Alignment segment 1/1: (-)
 Quality: 32.00 Score: 264
 Matching length: 11 Total length: 11
 Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
 ::::|||||:|||||:|||||:|||||:|||||: ::::|||||:|||||:|||||:|||||:|||||:
 197 MAGCTGCCCTCCGCGCGGCTCTCGGCTCT 165
 Sequence name: rngp2ndb:AD050439
 Sequence documentation:
 ID AD050439 standard; DNA, 1380 BP.
 XX
 AC AD050439;
 XX
 DT 29-JUL-2004 (first entry)
 XX

```
DE Human Asp-2(a)delcatM(His)6 DNA.
XX
XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; gene; ds.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1380
XX /*tag= a
XX /product= "Human Asp-2(a)delcatM(His)6 protein"
XX /transl_except= (pos:640..642, aa:Gln)
XX /transl_except= (pos:1360..1362, aa:His)
XX /transl_except= (pos:1363..1365, aa:His)
XX /transl_except= (pos:1366..1368, aa:His)
XX /transl_except= (pos:1369..1371, aa:His)
XX /transl_except= (pos:1372..1374, aa:His)
XX /transl_except= (pos:1375..1377, aa:His)
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XX US6737510-B1.
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XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX P-PSDB; ADO50440.
XX
XX MPI; 2004-387112/36.
XX
XX DR
XX DR
XX PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
XX PT involved in processing amyloid precursor protein into amyloid beta,
XX PT useful in preparing a composition for treating or preventing Alzheimer's
XX PT disease.
XX
XX PS Example 10; SEQ ID NO 31; 108bp; English.
XX
XX CC The invention relates to a method for identifying an agent that decreases
XX CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX CC provides enzyme and enzymatic procedures for cleaving the beta secretase
XX CC cleavage site of the amyloid precursor protein (APP). The invention is
XX CC useful in preparing a composition for treating or preventing Alzheimer's
XX CC disease. It is also useful in gene therapy. The present sequence is human
XX CC Asp-2(a)delcatM(His)6 DNA. This sequence is used to illustrate the method
XX CC of the invention.
XX
XX SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADO50439 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Matching Length: 32.00 Total Length: 264
XX Matching Percent Similarity: 81.82 Matching Percent Identity: 11
XX Total Percent Similarity: 81.82 Total Percent Identity: 54.55
XX Gaps: 0
XX
XX Alignment:
XX
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX ::::::::::::::::::::: 147
XX 179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT
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Sequence name: rngp2ndb:ADR75344
Sequence documentation:
XX ID ADR75344 standard; DNA; 1380 BP.
XX
XX ADR75344;
XX
XX 18-NOV-2004 (first entry)
XX
XX T7-Caspase-Human-pro-Asp-2(a)delcatM chimeric DNA.
XX
XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KW chromosome identification; Alzheimer's disease; human; caspase; chimeric;
XX gene; ds.
XX
XX Homo sapiens.
OS Chimeric.
XX Unidentified.
XX
XX Key Location/Qualifiers
XX CDS 1..1380
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XX /product= "T7-Caspase-Human-pro-Asp-2(a)delcatM chimeric
XX protein"
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XX US200416507-A1.
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XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 13-OCT-1999; 99US-00416901.
XX
XX (GURN/) GURNEY M E.
XX (BIEN/) BIENKOWSKI M J.
XX (HEIN/) HEINRICHSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX P-PSDB; ADR75345.
XX
XX MPI; 2004-624916/60.
XX
XX DR
XX DR
XX PT Novel purified/isolated polynucleotide encoding polypeptide having
XX PT aspartyl protease activity involved in processing amyloid precursor
XX PT protein into amyloid beta, useful in identifying agent decreasing
XX PT activity of aspartyl protease.
XX
XX PS Example 9; SEQ ID NO 23; 107bp; English.
XX
XX CC The invention relates to nucleic acid sequences encoding aspartyl
XX CC protease (Asp) polypeptides having aspartyl protease activity involved in
XX CC processing amyloid precursor protein (APP) into amyloid beta. The
XX CC invention also relates to a method for identifying an agent that
XX CC decreases the protease activity of the Asp. Asp DNA is useful in
XX CC chromosome identification as they can hybridise with a specific location
XX CC on a human chromosome and in identifying the relationship between genes
XX CC and diseases (particular gene responsible for causing diseases). It is
XX CC also useful for identifying candidates to modulate the progression of
XX CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX CC present sequence is the human T7-Caspase-Human-pro-Asp-2(a)delcatM
XX CC chimeric DNA. This sequence is used to illustrate the method of the
XX CC invention.
XX
XX SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADR75344 ..
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Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgserglyLeuglyAla      37
   ::|||::|::|::|::|::|::|::|::|::|
197 AAGCTGCCCCCTCGGCCGGGTCTCTCGGACTCT .    165
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Sequence name: rncgp2ndb:ADR75352

Sequence documentation

ID ADR75352 standard; DNA; 1380 BP.

AC ADR75352;

DT 18-NOV-2004 (first entry)

DE Human Asp-2(a)delcatm(His)6 DNA.

KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta
KM chromosome identification; Alzheimer's disease; human; gene; ss.

OS Homo sapiens.
OS Synthetic.

FH	Key	Location/Qualifiers
FT	CDS	1. .1380

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PT /product= "Human Asp-2(4a)delictM(His)6 protein
PT /trnsls_except= (pos:640..642, aa:Gln)
PT /trnsls_except= (pos:1360..1362, aa:His)
PT /trnsls_except= (pos:1363..1365, aa:His)
PT /trnsls_except= (pos:1366..1368, aa:His)
PT /trnsls_except= (pos:1369..1371, aa:His)
PT /trnsls_except= (pos:1372..1374, aa:His)
PT /trnsls_except= (pos:1375..1377, aa:His)

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FT      /tag= a
FT      /product= "beta-secretase"
FT      /note= "no termination codon given"
PN      WO200047618-A2.
PD      17-AUG-2000.
PP      10-FEB-2000; 2000MO-US003819.
PR      10-FEB-1999; 99US-0119571P.
PR      15-JUN-1999; 99US-0139172P.
PA      (ELAN-) ELAN PHARM INC.
PI      Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M;
PI      Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;
DR      WPI; 2000-533011/48.
DR      P-PSDB; AAB07896.
PT      Purified beta-secretase protein used in assays to discover inhibitors
PT      which can be used for the treatment of amyloidogenic diseases e.g.
PT      Alzheimer's disease.
PS      Disclosure; Fig 1A; 121pp; English.
XX      CC The specification describes a beta-secretase enzyme. The enzyme cleaves
XX      beta-amyloid precursor protein to produce beta-amyloid peptide. This
XX      enzyme is therefore implicated in the production of amyloid plaque
XX      components which accumulate in the brains of individuals afflicted with
XX      Alzheimer's disease. Inhibitors of beta-secretase are administered to a
XX      mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-
XX      like pathology to test if they maintain or improve cognitive ability or
XX      reduce the plaque burden. The compounds are used for the treatment of
XX      amyloidogenic diseases e.g. Alzheimer's disease. The present sequence
XX      encodes a human beta-secretase enzyme
SQ      Sequence 1503 BP; 305 A; 448 C; 431 G; 319 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAA59550 ..
Alignment segment 1/1: (-)
      Quality: 32.00      Score: 264
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0
Alignment:
      27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
      ::::|||||:|||||:|||||:|||||:|||||:      :
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT      147
Sequence name: rngp2ndb:ACC84849
Sequence documentation:
ID      ACC84849 standard; DNA; 1506 BP.
XX      AC      ACC84849;
XX      DT      12-SEP-2003 (first entry)
XX      DE      Human memapsin 2 protein encoding DNA.
XX      KW      Memapsin 1; neurotrophic; neuroprotective; memapsin 2; beta secretase;
XX      beta-amyloid protein; Alzheimer's disease; human; gene; ds.
XX      OS      Homo sapiens.
XX      FH      Key      Location/Qualifiers

```

```

FT      CDS      1..1506
FT      /tag= a
FT      /product= "memapsin 2"
FT      sig_peptide      1..63
FT      /tag= b
FT      mat_peptide      64..1503
FT      /tag= c
PN      WO2003039454-A2.
PD      15-MAY-2003.
PP      23-OCT-2002; 2002WO-US034324.
PR      23-OCT-2001; 2001US-0335952P.
PR      27-NOV-2001; 2001US-0333545P.
PR      14-JAN-2002; 2002US-0348464P.
PR      14-JAN-2002; 2002US-0348615P.
PR      20-JUN-2002; 2002US-0390804P.
PR      19-JUL-2002; 2002US-0397557P.
PR      19-JUL-2002; 2002US-0397619P.
XX      PA      (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX      PA      (UNIT ) UNIT ILLINOIS FOUND.
XX      PI      Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J;
XX      PI      Turner RT;
XX      DR      WPI; 2003-541410/51.
XX      DR      P-PSDB; ABR61928.
XX      PT      New peptide compounds are memapsin beta secretase inhibitors used for
XX      PT      treating Alzheimer's disease.
XX      PS      Claim 101; Fig 8; 407pp; English.
XX      CC      The invention relates to peptide compounds of specified formula. The
XX      CC      compounds exhibit memapsin 2-beta secretase inhibitory activity relative
XX      CC      to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid
XX      CC      protein. The compounds can be used for treating Alzheimer's disease. The
XX      CC      present sequence represents a human memapsin 2 protein encoding DNA
XX      CC      (Genbank Index (GI):21040369)
XX      SQ      Sequence 1506 BP; 306 A; 449 C; 431 G; 320 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ACC84849 ..
Alignment segment 1/1: (-)
      Quality: 32.00      Score: 264
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0
Alignment:
      27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
      ::::|||||:|||||:|||||:|||||:|||||:      :
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT      147
Sequence name: rngp2ndb:ADL18183
Sequence documentation:
ID      ADL18183 standard; cDNA; 1506 BP.
XX      AC      ADL18183;
XX      DT      06-MAY-2004 (first entry)
XX      DE      Human APP beta-secretase encoding cDNA SEQ ID NO:103.
XX      KW      chimeric protein; signal protein; trafficking signal targeting;

```


Sequence documentation:

ID ABA02406 standard; cDNA; 1527 BP.

AC ABA02406;

XX 26-FEB-2002 (first entry)

DT FLAG-tagged human beta-secretase encoding cDNA.

XX Human; beta-secretase; FLAG tag; inhibitor; amine compound;

XX beta amyloid precursor production; head injury; spinal injury;

XX amyloid precursor protein alpha secretion; nerve damage;

XX meningitis sequelae; cerebral paralysis; memory disorder; mental disease;

XX neurotropic; neuroprotective; cerebroprotective; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FH CDS 1..1527

FT /*tag= a

FT /partial

FT /product= "FLAG-tagged human beta-secretase"

FT /note= "No stop codon given in the specification"

XX MO200187293-A1.

XX 22-NOV-2001.

XX 18-MAY-2001; 2001WO-JP004144.

XX 19-MAY-2000; 2000JP-00152758.

XX (TAKE) TAKEDA CHEM IND LTD.

XX Miyamoto M, Matsui J, Fukumoto H, Tarui N;

XX WPI; 2002-055640/07.

XX P-PSDB; AAMS2697.

XX Beta-secretase inhibitor used for treating e.g. Alzheimer's disease and

XX injury to brain or spine, and neurodegeneration, comprises amine

XX compound.

XX Example; Page 78-79; 86pp; Japanese.

XX The invention relates to novel amine compounds which are beta-secretase

XX inhibitors. The beta-secretase compounds also have the ability to promote

XX amyloid precursor protein alpha secretion and to inhibit beta amyloid

XX protein production. The beta-secretase inhibitors of the invention can be

XX used for treating head or spinal injuries, nerve damage, sequelae of

XX meningitis, cerebral paralysis, memory disorders and mental diseases. The

XX present sequence represents cDNA encoding a FLAG-tagged human beta-

XX secretase used in the exemplifications of the invention

XX Sequence 1527 BP; 315 A; 451 C; 438 G; 323 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x ABA02406 ..

XX Alignment segment 1/1: (-)

Matching length:	32.00	Total length:	264
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyA
:::|||||
179 AAGCTGCCCCCTCCGGCCGGGCTCTGGGCTCT
147

```

Sequence name: rngp2ndb:ADJ71857

Sequence documentation:

ID ADJ71857 standard; cDNA; 1527 BP.

AC ADJ71857;

XX 06-MAY-2004 (first entry)

DT Human cDNA SEQ ID NO: 6.

XX N-Substituted aryl carboxamide; neuroprotective; neurotropic; neuroleptic;

XX muscular; antiparkinsonian; cerebroprotective; vasotropic; haemostatic;

XX antiarteriosclerotic; antidepressant; neurodegeneration; nerve damage;

XX memory disorders; psychiatric disease; myopathy;

XX mild cognitive impairment; Alzheimer's disease; ss; gene; human.

XX Homo sapiens.

XX Key Location/Qualifiers

FH CDS 1..1527

FT /*tag= a

XX MO2004014843-A1.

XX 19-FEB-2004.

XX 07-AUG-2003; 2003WO-JP010045.

XX 09-AUG-2002; 2002JP-00233231.

XX (TAKE) TAKEDA CHEM IND LTD.

XX Uchikawa O, Aso K, Koike T, Tarui N, Hirai K;

XX WPI; 2004-238691/22.

XX P-PSDB; ADJ71858.

XX New/known aryl carboxamide derivatives as inhibitors of aspartic acid

XX protease and beta secretase for treating Alzheimer's disease,

XX neurodegeneration, nerve damage, memory disorders, psychiatric disease,

XX myopathy and cognitive impairment.

XX Example 1; SEQ ID NO 6; 90pp; Japanese.

XX The invention relates to novel N-Substituted aryl carboxamide compounds

XX (1) and their salts. A compound of the invention has neuroprotective,

XX neurotropic, neuroleptic, muscular-gen., antiparkinsonian, and

XX cerebroprotective, vasotropic, haemostatic, antiarteriosclerotic, and

XX antidepressant activity. The compounds are used to prevent and treat

XX neurodegeneration, nerve damage, memory disorders, psychiatric disease,

XX myopathy, mild cognitive impairment, or Alzheimer's disease, including

XX Down's syndrome, senile dementia, Parkinson's disease, Creutzfeldt-Jacob

XX disease, amyotrophic lateral sclerosis, diabetic neuropathy, Huntington's

XX chorea, multiple sclerosis, cerebrovascular disorders, cerebral embolism,

XX cerebral haemorrhage, cerebral arteriosclerosis, head injuries, spinal

XX injuries, post-encephalitic disease, cerebral palsy, depression, panic

XX disorder and schizophrenia. The present sequence is used in the

XX exemplification of the invention.

XX Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x ADJ71857 ..

Matching length:	32.00	Total length:	264
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
 ::::::::::: :::::::::::
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37
 147

Sequence name: rngp2ndb:ADP74534

Sequence documentation:

ID ADP74534 standard; cDNA; 1527 BP.

AC ADP74534;

DT 12-AUG-2004 (first entry)

DE Human indole compound-related beta-secretase cDNA.

XX indole; neuroprotective; nootropic; antiparkinsonian; myopathy;
 KW neuropathy; memory defect; senile dementia; amnesia; mental illness;
 KW neurodegenerative disease; Alzheimer's; Creutzfeldt Jacob; CJD;
 KW amyotrophic lateral sclerosis; Parkinson's; beta-secretase; ss; gene;
 KW human.

OS Homo sapiens.

Key Location/Qualifiers

FT CDS 1..1527

FT /tag= a
 FT /product= "Human indole compound-related beta-secretase
 protein"

JP2004149429-A.

XX 27-MAY-2004.

XX 29-OCT-2002; 2002JP-00314580.

XX 29-OCT-2002; 2002JP-00314580.

XX (TAKE) TAKEDA CHEM IND LTD.

XX WPI; 2004-405630/38.

DR P-PSDB; ADP74535.

PT Novel indole compound useful for treating senile dementia, Alzheimer's
 PT disease, Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis,
 PT Parkinson's disease, neuropathy, senile dementia, amnesia or myopathy.

XX Example 119; SEQ ID NO 6; 67pp; Japanese.

CC The invention relates to a novel indole compound. The compound of the
 CC invention demonstrates neuroprotective, nootropic and antiparkinsonian
 CC activities and may be useful as a preventive or therapeutic agent of
 CC myopathy, neuropathy, defects of memory e.g. senile dementia or amnesia,
 CC mental illness and neurodegenerative disease, including Alzheimer's
 CC disease, Creutzfeldt Jacob disease, amyotrophic lateral sclerosis or
 CC Parkinson's disease. The peptide of the invention may be useful for
 CC measuring the beta-secretase inhibitory activity of a test compound. The
 CC current sequence is that of the human indole compound-related beta-
 CC secretase cDNA of the invention.

XX Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP74534 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla
 ..::::::::: :::::::::::
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37
 147

Sequence name: rngp2ndb:ADH34044

Sequence documentation:

ID ADH34044 standard; cDNA; 1542 BP.

AC ADH34044;

DT 11-MAR-2004 (first entry)

DE Human cDNA for His-tagged BACE (Beta-secretase).

XX BACE-2; inhibitor; Alzheimer's disease;
 KW neuroprotective; nootropic; amyloid precursor protein;
 KW beta-amyloid peptide; cerebrovascular amyloidosis; ss; gene.

OS Synthetic.

OS Homo sapiens.

XX US2003125257-A1.

XX 03-JUL-2003.

XX 18-DEC-2002; 2002US-00322684.

XX 20-DEC-2001; 2001EP-00130282.

XX (BROC/) BROCKHAUS M.

XX (DOEB/) DOEBELI H.

XX (GRUE/) GRUENINGER F.

XX (HUGU/) HUGUENIN P.

XX (KITA/) KITAS E A.

XX (NELB/) NELBOECK-HOCHSTETTER P.

PI Brockhaus M, Doebeli H, Grueninger F, Huguenin P, Kitas EA,
 PI Nelboeck-Hochstetter P;
 DR WPI; 2004-088811/09.

XX Example 1; SEQ ID NO 1; 23pp; English.

CC The invention relates to peptide beta-secretase (bs) inhibitors of
 CC genetic formula appearing as ADH34057. Also included are an assay for
 CC identifying inhibitors of bs, screening compounds for inhibition of bs
 CC activity, a kit for identifying a bs inhibitor and bs inhibitors
 CC identified using the kit. The bs used is isolated or recombinant, and
 CC purified, especially a full-length bs, specifically BACE or BACE-2. The
 CC inhibitors of beta-secretase (which is involved in degradation of amyloid
 CC precursor protein to beta-amyloid peptide) are used for treating patients
 CC with, or predisposed to, cerebrovascular amyloidosis, specifically
 CC Alzheimer's disease. They are also used to prepare tagged derivatives,
 CC useful in screening compounds for identifying other bs inhibitors and for
 CC radiolabeling or positron emission tomographic imaging. The present
 CC sequence encodes a His-tagged BACE protein used to produce BACE
 CC protein recombinantly.

XX Sequence 1542 BP; 322 A; 459 C; 433 G; 328 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADH34044 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment: Gaps: 0

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::
194 AACGTGCCCCCTCCGCGCGGCTCCTCCGCGCTCT 162

Sequence name: rngp2ndb:AAA15663

Sequence documentation:

ID AAA15663 standard; cDNA; 1977 BP.

XX AAA15663;

DT 03-AUG-2000 (first entry)

DE Human aspartyl protease 2 (b) (Asp2) nucleotide sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

KM Alzheimer's disease; beta secretase site; ss.

XX Homo sapiens.

PN WO200017369-A2.

PD 30-MAR-2000.

XX 23-SEP-1999; 99WO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2000-303209/26.

XX P-PSDB; AAY88426.

PT New enzyme designated human aspartase useful in research into Alzheimer's

XX disease is capable of cleaving amyloid protein precursor at the beta

PS secretase site to produce amyloid beta peptide.

XX Claim 8; Fig 3; 183pp; English.

CC This sequence represents the human aspartyl protease 2 (Asp2) nucleotide
CC sequence. The invention relates to a protease (e.g. Asp2) capable of
CC cleaving the beta secretase site of amyloid precursor protein (APP). The
CC protease contains a sequence encoding the amino acid sequence DTG and a
CC sequence encoding DSG or DTG separated by 100-300 amino acids. When
CC mutated the APP gene causes an autosomal dominant form of Alzheimer's
CC disease. APP localises to the cell surface membrane and have a single C-
CC terminal transmembrane domain. Proteolytic processing of APP produces the
CC amyloid beta protein, which is possibly very important in Alzheimer's
CC disease. The invention includes a nucleotide sequence encoding the
CC protease, a vector containing the nucleotide sequence, and a cell line
CC comprising the vector. Methods for screening for inhibitors of beta
CC secretase activity are also given in the invention. The human aspartase
CC protein and nucleotide sequences and the methods for identifying
CC inhibitors of the protease, are useful in the treatment of and research
CC in to Alzheimer's disease
XX
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: ua-10-726-967a-1 x AAA15663 ..

Alignment segment 1/1: (-)

Matching length: 32.00
Matching Percent Similarity: 81.82
Total length: 264
Matching Percent Identity: 54.55
Total Percent Similarity: 81.82
Total Percent Identity: 54.55
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::
179 AACGTGCCCCCTCCGCGCGGCTCCTCCGCGCTCT 147

Sequence name: rngp2ndb:AAS11703

Sequence documentation:

ID AAS11703 standard; DNA; 1977 BP.

XX AAS11703;

DT 24-OCT-2001 (first entry)

DE DNA encoding human aspartyl protease 2b (Asp-2b).

XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

XX beta-secretase; Alzheimer's disease; ds.

XX Homo sapiens.

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PS Claim 98; Fig 2; 185pp; English.
CC The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid protein precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further


```
FT      /tag= C
FT      /product= "Mature human aspartyl protease 2b (Hu-Asp2b)"
XX
XX      WO200150829-A2.
XX
XX      19-JUL-2001.
XX
XX      09-MAY-2001; 2001WO-IB000799.
XX
XX      09-MAY-2001; 2001WO-IB000799.
XX
XX      (BIEN/) BIENKOWSKI M J.
XX      (GURNEY/) GURNEY M E.
XX      (HEIN/) HEINRIKSON R L.
XX      (PARO/) PARODI L A.
XX      (YANR/) YAN R.
XX
XX      Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX      MPI: 2001-483072/52.
XX      P-PSDB; AAE06860.
XX
XX      Novel purified polypeptide comprising fragment of mammalian aspartyl
XX      protease 2, lacking Asp2 transmembrane domain and retaining beta
XX      secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX      activity.
XX
XX      Claim 98; Fig 3; 185pp; English.
XX
XX      The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX      precursor protein (APP) isoforms and their corresponding DNA molecules.
XX      Human aspartyl proteases can act as beta-secretase proteases useful for
XX      treating Alzheimer's disease. APP isoforms are useful for identifying
XX      modulators of amyloid-beta peptide production, for use in designing
XX      therapeutics for the treatment and prevention of Alzheimer's disease,
XX      dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX      and neuronal loss. APP isoforms are also used in methods for identifying
XX      inhibitors and modulators of human Asp2 activity. The invention relates
XX      to a method for identifying agents that modulate the activity of human
XX      aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX      as a means to screen in cellular assays for the inhibitors of beta- and
XX      gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX      polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX      Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX      The present cDNA sequence encodes human aspartyl protease 2 (Hu-Asp2), a
XX      'short' form designated as (Hu-Asp2b). Hu-Asp 2 gene is localised on
XX      chromosome 11q23.3-24.1
XX
XX      Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x AAD13022 ..
XX
XX      Alignment segment 1/1: (-)
XX
XX      Matching Quality: 32.00
XX      Matching Percent Similarity: 81.82 Total length: 264
XX      Total Percent Similarity: 81.82 Matching Percent Identity: 54.55
XX      Total Percent Identity: 54.55
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX      :::::::::::::::::::::::::::::
XX      179 AAGCTGCCCTCCGCGCGGCTCTCGGAGCTCT 147
XX
XX      Sequence name: rngp2n.b: AAD06740
XX
XX      Sequence documentation:
XX      ID AAD06740 standard; cDNA; 1977 BP.
XX
XX      AAD06740;
XX
```

```
DT      10-AUG-2001 (first entry)
XX
XX      Human aspartyl protease 2b (Asp2b) cDNA.
XX
XX      Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX      Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2b; Asp 2b;
XX      beta-secretase; chromosome 11q23.3-24.1; ss.
XX
XX      Homo sapiens.
XX
XX      Key Location/Qualifiers
XX      CDS 1..1431
XX      FT /*tag= a
XX      FT /product= "Human aspartyl protease 2b"
XX      FT sig_peptide 1..63
XX      FT /*tag= b
XX      FT sig_peptide 64..135
XX      FT /*tag= c
XX      FT /note= "Pre-pro-peptide"
XX      FT sig_peptide 136..171
XX      FT /*tag= d
XX      FT /note= "Pro-peptide"
XX      FT mat_peptide 172..1428
XX      FT /*tag= e
XX      FT /product= "Human mature aspartyl protease 2b"
XX
XX      WO200123533-A2.
XX
XX      05-APR-2001.
XX
XX      22-SEP-2000; 2000WO-US026080.
XX
XX      23-SRP-1999; 99US-0155493P.
XX      PR 23-SEP-1999; 99WO-US020881.
XX      PR 13-OCT-1999; 99US-00416901.
XX      PR 06-DEC-1999; 99US-0169232P.
XX
XX      (PHMA ) PHARMACIA & UPJOHN CO.
XX
XX      Gurney M, Bienkowski MJ;
XX
XX      MPI: 2001-290516/30.
XX      P-PSDB; AAE02582.
XX
XX      Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX      PT protein, useful for the treatment of Alzheimer's disease.
XX
XX      Example 2; Page 129; 189pp; English.
XX
XX      The present invention relates to enzymes for cleaving the alpha-
XX      CC secretase site of the amyloid precursor protein (APP) and methods of
XX      CC identifying those enzymes. The methods may be used to identify enzymes
XX      CC that may be used to cleave the alpha-secretase cleavage site of the APP
XX      CC protein. The enzymes may be used to treat or modulate the progress of
XX      CC Alzheimer's disease. The present sequence is human aspartyl protease
XX      CC (Asp) 2b cDNA. Asp 2b has beta-secretase protease activity. Asp2 gene is
XX      CC located on chromosome 11q23.3-24.1
XX
XX      Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x AAD06740 ..
XX
XX      Alignment segment 1/1: (-)
XX
XX      Matching Quality: 32.00
XX      Matching Percent Similarity: 81.82 Total length: 264
XX      Total Percent Similarity: 81.82 Matching Percent Identity: 54.55
XX      Total Percent Identity: 54.55
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX
```

```

:::|||||:::
179 AAGCTGCCCCCGGCGGCTCCTCGGCTCT

```

147

Sequence name: rng2ndb:AA511518

Sequence documentation:

ID AA511518 standard; cDNA; 1977 BP.

AA511518;

24-OCT-2001 (first entry)

Human cDNA encoding Aspartyl protease 2 (b), Asp2 (b).

Human: Aspartyl protease; Asp2 (b); beta-secretase; neurotropic;

neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

amyloid-beta; Abeta; ss.

Homo sapiens.

Key

CDS

sig_peptide

sig_peptide

sig_peptide

mat_peptide

WO200149098-A2.

12-JUL-2001.

09-MAY-2001; 2001WO-IB000798.

09-MAY-2001; 2001WO-IB000798.

(BIEN/) BIENKOWSKI M J.

(GURNEY/) GURNEY M E.

(HEIN/) HEINRIKSON R L.

(PARO/) PARODI L A.

(YANR/) YAN R.

Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

WPI; 2001-502549/55.

P-PSDB; AAU06604.

Novel purified polypeptide comprising fragment of mammalian aspartyl

protease 2, lacking Asp2 transmembrane domain and retaining beta

secretase activity of Asp2 useful for identifying inhibitors of Asp2

activity.

Claim 98; Fig 3; 185pp; English.

The invention relates to a purified polypeptide comprising a fragment of mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide and the fragment retain the beta-secretase activity of the mammalian Asp2 protein. The invention also details polynucleotides for the Asp proteins and vectors expressing them, and a polypeptide (isoform of amyloid protein precursor (APP)) comprising the amino acid sequence of an APP or its fragment containing an APP cleavage site recognizable by a mammalian beta-secretase, and further comprising two lysine residues at the carboxyl terminus of the amino acid sequence of the mammalian APP or APP fragment. Also included in the invention are methods of identifying

CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are CC useful for treating Alzheimer's disease. APP is useful in methods for CC identifying inhibitors or modulators of human Asp2 activity and amyloid-beta (Abeta) peptide production. APP is also useful in designing CC therapeutics for the treatment or prevention of Alzheimer's disease. APP CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is CC associated with increased levels of Abeta processing is useful in assays CC relating the Alzheimer's research. The expression vector is useful for CC recombinantly expressing APP. Nucleic acids that hybridize to Asp CC oligonucleotides are useful as probes or primers. The probes are useful CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and CC Southern blots. The present sequence encodes human Asp2 (b)

SO Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511518 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::
179 AAGCTGCCCCCGGCGGCTCCTCGGCTCT          147

```

Sequence name: rng2ndb:ABL49915

Sequence documentation:

ID ABL49915 standard; DNA; 1977 BP.

ABL49915;

31-MAY-2002 (first entry)

Human aspartyl protease nucleotide sequence SEQ ID NO:3.

Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;

aspartyl protease; neuroprotective; neurotropic; beta-secretase inhibitor;

Alzheimer's disease; gene; ds.

Homo sapiens.

WO200206306-A2.

24-JUN-2002.

19-JUL-2001; 2001WO-US023035.

19-JUL-2000; 2000US-0219795P.

12-MAR-2001; 2001US-0275251P.

(PHAA) PHARMACIA & UPJOHN CO.

Yan R, Tomaselli AG, Gurney ME, Emmons TL, Blenkowski MJ;

Heinrichson RL;

WPI; 2002-216995/27.

P-PSDB; ABB06410.

Novel substrates for human aspartyl protease useful for identifying

modulators of beta secretase activity of aspartyl protease for treating

Alzheimer's disease.

Claim 1; Page 119-120; 188pp; English.

The present invention describes an isolated peptide (1) comprising a sequence of at least four amino acids, where the peptide is a substrate

CC for conducting aspartyl protease assays. (1) has neuroprotective and
 CC nootropic activities, and can be used as an inhibitor of beta-secretase
 CC activity. A beta-secretase modulator from the present invention can be
 CC used for inhibiting beta-secretase activity in vivo, and in the
 CC manufacture of a medicament for the treatment of Alzheimer's disease.
 CC Pharmaceutical compositions from the present invention can be used for
 CC treating a disease or condition characterised by an abnormal beta-
 CC secretase activity. (1) is useful for identifying agents that modulate
 CC the activity of human Asp2 aspartyl protease (Hu-Asp2). (1) is useful as
 CC a core structure to construct derivatives. ABL4914 to ABL4925 and
 CC ABB06409 to ABB06593 represent sequences used in the exemplification of
 CC the present invention

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL49915 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
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179 AAGCTGCCCTCTCCGCGCGGCTCTCGGCTCTCT

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Sequence name: trnp2ndb:ABL52458

Sequence documentation:

ID ABL52458 standard; cDNA; 1977 BP.

XX ABL52458;

XX 16-JUL-2002 (first entry)

DE Human Asp-2(b) nucleotide sequence SEQ ID NO:5.

XX Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;
 KW proteolytic; chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431
 FT /tag= a
 FT /product= "Asp-2(b)"
 FT /note= "aspartyl protease"

XX GB2367060-A.

XX 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Blenkoweki MJ, Gurney M;
 XX WPI; 2002-397167/43.
 XX P-P5DB; ABB78591.
 XX

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 2; Fig 3; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (1) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (11) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (111) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (111') comprising a sequence that
 CC hybridises under stringent conditions to (111) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB785891); (4) a vector (1V)
 CC comprising (111) or (111') and (5) a host cell (1V) transformed or
 CC transfected with (111), (111') and/or (1V). The hu-Asp1 protease
 CC substrate (1) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (11) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes hu-Asp2(b) from the present invention

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52458 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|:: 147
179 AAGCTGCCCTCTCCGCGCGGCTCTCGGCTCTCT

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Sequence name: trnp2ndb:ADJ94317

Sequence documentation:

ID ADJ94317 standard; cDNA; 1977 BP.

XX ADJ94317;

XX 03-JUN-2004 (first entry)

DE Human cDNA encoding aspartyl protease 2b, Asp-2b.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
 KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 KW nootropic; neuroprotective; amyloid beta.

XX Homo sapiens.

XX US6706485-B1.

XX 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR	23-SEP-1999:	99WO-US020881..	
PR	13-OCT-1999:	99US-00416901.	
XX			
PA	(PHAA)	PHARMACIA & UPJOHN CO.	
XX			
PI	Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;		
DR	WPI, 2004-236722/22.		
XX	P-PSDB; ABD94318.		
PT	Identifying agents that modulate activity of Asp2 aspartyl protease		
PT	useful for treating or preventing Alzheimer's disease involves comparing		
PT	App processing activity of protease in presence and absence of test		
XX	agent.		
XX			
PS	Claim 1; SEQ ID NO 5; 109pp; English.		
CC			
CC	The invention relates to identifying agents that modulate activity of		
CC	Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,		
CC	encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid		
CC	precursor protein (APP) in the presence and absence of a test agent,		
CC	where Asp2 is a recombinant polypeptide and processes APP into amyloid		
CC	beta, determining APP processing activity of Asp2 in presence and absence		
CC	of the test agent, and comparing the activities to identify agents that		
CC	modulate the activity of Asp2. Also disclosed are the cDNA and proteins		
CC	for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the		
CC	nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising		
CC	the vector and the method of producing Hu-Asp polypeptide, an isolated		
CC	antibody that specifically binds to Hu-Asp polypeptides, identifying a		
CC	cell that can be used to screen for inhibitors of beta secretase		
CC	activity, novel isoforms of amyloid protein precursor (APP), where the		
CC	last 2 carboxy terminus amino acids of that isoform are both lysine		
CC	residues (e.g. those designated APP695-KK or carrying the Swedish		
CC	mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw		
CC	or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful		
CC	for assaying for beta secretase activity and screening for inhibitors of		
CC	beta-secretase) and polynucleotides that encode the APP proteins. The		
CC	method is useful for identifying agents that modulate the activity		
CC	(amyloid precursor protein processing activity) of Asp2 aspartyl		
CC	protease. Preferably, the method is useful for identifying agents that		
CC	inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid		
CC	precursor protein processing, are useful for treating or preventing		
CC	Alzheimer's disease. The present sequence encodes an aspartyl protease of		
CC	the invention.		
XX			
XX			
SO	Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;		
	Alignment of: us-10-726-967a-1 x ABD94317 ..		
	Alignment segment 1/1: (-)		
		Quality: 32.00	EScore: 264
	Matching length: 11	Total length: 11	
	Matching Percent Similarity: 81.82	Matching Percent Identity: 54.55	
	Total Percent Similarity: 81.82	Total Percent Identity: 54.55	
	Gaps: 0		
Alignment:			
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	::: ::: ::: :::		
	179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT	147	
Sequence name: rmgp2ndb:AD050413			
Sequence documentation:			
ID AD050413 standard; cDNA; 1977 BP.			
AC AD050413;			
XX			
DT 29-JUL-2004 (first entry)			
XX			
DE Human aspartyl protease (Asp-2(b)) cDNA.			

```

XX Asparyl1 protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1;
KW ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
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FT sig_peptide 1..63
FT mat_peptide /*tag= a
FT /*tag= 64..1428
FT /*tag= c
FT /product= "Human mature Asp-2 protein"
XX
XX US6737510-B1.
XX
XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1999; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX
XX (PANA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
XX MPI; 2004-387112/36.
XX
XX P-PSDB; ADO50414.
XX
XX New Asp2 aspartyl1 protease protein comprising tripeptides DTG and DSG
XX involved in processing amyloid precursor protein into amyloid beta,
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease.
XX
XX Claim 1; SEQ ID NO 5; 108bp; English.
XX
XX The invention relates to a method for identifying an agent that decreases
XX the protease activity of the aspartyl1 protease (Asp) polypeptide. It also
XX provides enzyme and enzymatic procedures for cleaving the beta secretase
XX cleavage site of the amyloid precursor protein (APP). The invention is
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease. It is also useful in gene therapy. The present sequence is human
XX Asp-2 CDNA. Human App-2 gene is located at chromosome 11q23.3-24.1. This
XX sequence is used to illustrate the method of the invention.
XX
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADO50413 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Quality: 32.00
XX Matching Length: 11
XX Matching Percent Similarity: 81.82
XX Total Length: 264
XX Total Percent Identity: 54.55
XX Total Percent Identity: 54.55
XX Gaps: 0
XX
XX Alignment:
XX
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX :::::::::::::::::::::
XX 179 AAGCTGCCCCCTCCGGCCGGGCTCTCCTCGGGCTCT 147
XX
XX Sequence name: rmgp2ndb:ADR75326
XX
XX Sequence documentation:

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ID	ADR75326 standard; cDNA; 1977 BP.
XX	
AC	ADR75326;
XX	
DT	18-NOV-2004 (first entry)
XX	
DE	Human aspartyl protease (Asp)-2(b) cDNA.
XX	
KM	Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM	chromosome identification; Alzheimer's disease; human; gene; ss.
XX	
OS	Homo sapiens.
XX	
FH	Key Location/Qualifiers
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FT	sig_peptide 1..63
FT	/tag= a
FT	mat_peptide 64..1428
FT	/tag= C
FT	/product= "human mature Asp-2 protein"
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PN	US2004166507-A1.
XX	
PD	26-AUG-2004.
XX	
PX	29-AUG-2003; 2003US-00652045.
PR	24-SEP-1998; 98US-0101594P.
PR	23-SEP-1999; 99US-0040413J.
PR	23-SEP-1999; 99US-0155493P.
RR	13-OCT-1999; 99US-00416901.
PA	(GURN/) GURNEY M E.
PA	(BIEN/) BIENKOWAKI M J.
PA	(HEINR/) HEINRIKSON R L.
PA	(PARO/) PARODI L A.
PA	(YANR/) YAN R.
PI	Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
XX	
DR	WPI; 2004-624916/60.
DR	P-Psdb; ADR75327.
PT	Novel purified/isolated polynucleotide encoding polypeptide having
PT	aspartyl protease activity involved in processing amyloid precursor
PT	protein into amyloid beta, useful in identifying agent decreasing
PT	activity of aspartyl protease.
PS	Claim 1; SEQ ID NO 5; 107bp; English.
XX	
XX	The invention relates to nucleic acid sequences encoding aspartyl
CC	protease (asp) polypeptides having aspartyl protease activity involved in
CC	processing amyloid precursor protein (app) into amyloid beta. The
CC	invention also relates to a method for identifying an agent that
CC	decreases the protease activity of the Asp. Asp DNA is useful in
CC	chromosome identification as they can hybridise with a specific location
CC	on a human chromosome and in identifying the relationship between genes
CC	and diseases (particular gene responsible for causing diseases). It is
CC	also useful for identifying candidates to modulate the progression of
CC	Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC	in diagnostic assay for detecting hu-asp polypeptide expression. The
CC	present sequence is the human Asp-2(b) cDNA. This sequence is used to
CC	illustrate the method of the invention.
XX	
SQ	Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

```

27 ArgLeuProLeuArgSerGlyLeuGlyIylAla      37
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179 AAGCTGCCTCTCCGGCCGGGCTCCTCGGGCTCT      14

```

Sequence documentation:
ID AAA15662 standard; cDNA; 2070 BP.

AA	AAA15662;
AC	
XX	
DT	03-AUG-2000 (first entry)

DE Human aspartyl protease 2 (a) (Asp2) nucleotide sequence.

AA Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
KM Alzheimer's disease; beta secretase site; 89.
KM

Homo sapiens.

PN WO200017369-A2

PD 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R,

DR WPI; 2000-303209/26.

XX

PT Disease is capable of cleaving amyloid protein precursor at the beta

XX	7	5	1
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	7	115	111
	7	116	112
	7	117	113
	7	118	114
	7	119	115
	7	120	116

[illegible]

sequence. The invention relates to a protease (e.g. Asp2) capable of

protease contains a sequence encoding the amino acid sequence DTG and a

CC mutated the APP gene causes an autosomal dominant form of Alzheimer's

terminal transmembrane domain. Proteolytic processing of APP produces th

CC amyloid beta protein, which is possibly very important in Alzheimer's
CC disease. The invention includes a nucleotide sequence encoding the

comprising the vector. Methods for screening for inhibitors of beta

protein and nucleotide sequences and the methods for identifying

CC inhibitors of the protease, are useful in the treatment of and reduction in to Alzheimer's disease

Sequence 2070 BP: 476 A: 583 C: 562 G: 449 T: 0 U: 0 Other:

Assignment of: us-10-726-967a-1 x AAA15662

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	264
Matching length:	11	Total length:	11

Quality: 32.00

EScore:

264

Quality:	32.00
Matching length:	11

Score: 264
Total length: 11

[illegible]

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FT      mat_peptide      64..1503
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FT      /tag= c
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XX      WO200150829-A2.
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XX      19-JUL-2001.
XX
XX      09-MAY-2001; 2001WO-IB000799.
XX
XX      09-MAY-2001; 2001WO-IB000799.
XX
XX      (BIEN/) BIENKOWSKI M J.
XX      (GURN/) GURNEY M E.
XX      (HEIN/) HEINRIKSON R L.
XX      (PARO/) PARODI L A.
XX      (YANR/) YAN R.
XX
XX      Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX      WPI; 2001-483072/52.
XX      P-PSDB; AA068859.
XX
XX      Novel purified polypeptide comprising fragment of mammalian aspartyl
XX      protease 2, lacking Asp2 transmembrane domain and retaining beta
XX      decrease activity of Asp2 useful for identifying inhibitors of Asp2
XX      activity.
XX
XX      Claim 98; Fig 2; 185pp; English.
XX
XX      The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX      precursor protein (APP) isoforms and their corresponding DNA molecules.
XX      Human aspartyl proteases can act as beta-secretase proteases useful for
XX      treating Alzheimer's disease. APP isoforms are useful for identifying
XX      modulators of amyloid-beta peptide production, for use in designing
XX      therapeutics for the treatment and prevention of Alzheimer's disease,
XX      dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX      and neuronal loss. APP isoforms are also used in methods for identifying
XX      inhibitors and modulators of human Asp2 activity. The invention relates
XX      to a method for identifying agents that modulate the activity of human
XX      aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX      as means to screen in cellular assays for the inhibitors of beta- and
XX      gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX      polymerase chain reactions (PCR). The probes are useful for detecting Hu
XX      Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX      The present cDNA sequence encodes human aspartyl protease 2 (Hu-Asp2), a
XX      'long' form designated as (Hu-Asp2a). Hu-Asp 2 gene is localised on
XX      chromosome 11q23.3-24.1
XX
XX      Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x AAD13021 ..
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XX      Alignment segment 1/1: (-)
XX
XX      Quality:      32.00      Score:      264
XX      Matching Length:      11      Total length:      11
XX      Matching Percent Similarity:      81.82      Matching Percent Identity:      54.55
XX      Total Percent Similarity:      81.82      Total Percent Identity:      54.55
XX
XX      Gaps:      0
XX
XX      Alignment:
XX
XX      27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla      37
XX      ::::|||||:::|||||:::|||||:::
XX      179 AAGCTGCGCTCTCCGCGCGGCGCTCTCTCGGCGCTCT      147
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XX      Sequence name: rmp2ndb:AA06739
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XX      Sequence documentation:
XX      ID      AAD06739 standard; cDNA, 2070 BP

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XX	AAD06739;
XT	10-AUG-2001 (first entry)
XX	Human aspartyl protease 2a (asp2a) cDNA.
DE	Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW	Alzheimer's disease; anti-Alzheimer'; aspartyl protease 2a; Asp 2a;
KM	beta-secretase; chromosome 11q23.3-24.1; 8e.
XX	Homo sapiens.
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FH	Key
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XX	W0200123533-A2.
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PD	05-APR-2001.
XX	
PF	22-SEP-2000; 2000WO-US026080.
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PR	23-SEP-1999; 99US-0155493P.
PR	23-SEP-1999; 99WO-US020881.
PR	13-OCT-1999; 99US-00416901.
PR	06-DEC-1999; 99US-0169232P.
XX	
PA	(PHAA) PHARMACIA & UPJOHN CO.
PI	Gurney M, Bienkowiak MJ;
DR	WPI; 2001-290516/30.
DR	P-PADB; AAE02581.
XX	
PT	Enzymes that cleave the alpha-secretase site of the amyloid precursor
PS	protein, useful for the treatment of Alzheimer's disease.
XX	
PS	Example 2; Page 126-127; 189pp; English.
CC	The present invention relates to enzymes for cleaving the alpha-
CC	secretase site of the amyloid precursor protein (APP) and methods of
CC	identifying those enzymes. The methods may be used to identify enzymes
CC	that may be used to cleave the alpha-secretase cleavage site of the APP
CC	protein. The enzymes may be used to treat or modulate the progress of
CC	Alzheimer's disease. The present sequence is human aspartyl protease
CC	(Asp) 2a cDNA. Asp 2a has beta-secretase protease activity. Asp2 gene is
CC	located on chromosome 11q23.3-24.1
XX	
Sequence	2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment segment 1/1: (-)

Quality:	32.00	EScore:	267
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
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179 AAGCTGCCCTCCGGCGGGGTCTCTGGGGCTT      14

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Sequence name: rnp2ndb:AAS11517

Sequence documentation:
ID AAS11517 standard; cDNA; 2070 BP

AC AAS11517;

DT 24-OCT-2001 (first entry)

Human cDNA encoding Aspartyl protease 2 (a), Asp2 (a)

KW Human; Aspartyl protease; Asp2(a); beta-secretase; nontropic;
neuroprotective; amyloid precursor; APP; Alzheimer's disease.

kw amyloid-beta; Abeta; ss.
xx

XX
05 Hollis Bapstiens

FT	EH	Key	Location/Qualifiers
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/ -cag= a
/product= "Aan2(a)"

```

1. 03
big_blue
/*tag= b
FT

07.1.199	
/ *tag= c	
oag_pccccc	
FT	

FT	sig_peptide	
136.	.171	

/label= Pro_peptide

FT / *tag= e

XX

XXXX

PD 12-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000798.
YY

PR 09-MAY-2001; 2001WO-IB000798.
YY

PA (BIEN/) BIENKOWSKI M J.
PA (GITBN/) GITNEY M E

PA (HEIN/) HEINRIKSON R L.
PA (PABO/) PABODI I A

PA (YANK/) YAN K.
XX

Pl Bienkowski MJ, Gurney MB, Henriksson RL, Parodi LA, Yan R, XX

DR WP1; 2U01-502549/55
DR P-PSDB: AA1106603

Novel purified polypeptide comprising fragment of mammalian aspartyl

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2 protease 2, lacking Asp2 transmembrane domain and retaining beta

XX accuracy:

	1978-1979	---
XX	1979-1980	---

CC The invention relates to a purified polypeptide comprising a fragment of
CC mammalian aspartyl protease (Aap)2 protein which lacks the Asp2
CC transmembrane domain and the Asp2 protein, and where the polypeptide and
CC the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. The invention also details polynucleotides for the Asp proteins
CC and vectors expressing them, and a polypeptide (isoform of amyloid
CC protein precursor (APP)) comprising the amino acid sequence of an APP or
CC its fragment containing an APP cleavage site recognizable by a mammalian

CC beta-secretase, and further comprising two lysine residues at the
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC fragment. Also included in the invention are methods of identifying
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC useful for treating Alzheimer's disease. APP is useful in methods for
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC beta (A β) peptide production. APP is also useful in designing
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
CC associated with increased levels of A β processing is useful in assays
CC relating to the Alzheimer's research. The expression vector is useful for
CC recombinantly expressing APP. Nucleic acids that hybridize to APP
CC oligonucleotides are useful as probes or primers. The probes are useful
CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
CC Southern blots. The present sequence encodes human Asp2 (a)

XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL49914 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCCTCGGCTCT      147
```

Sequence name: rngp2ndb:ABL49914

Sequence documentation:

ID ABL49914 standard; DNA; 2070 BP.

XX ABL49914;

XX 31-MAY-2002 (first entry)

XX Human aspartyl protease nucleotide sequence SEQ ID NO:1.

XX Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;

XX aspartyl protease; neuroprotective; neurotropic; beta-secretase inhibitor;

XX Alzheimer's disease; gene; ds.

XX Homo sapiens.

XX WO200206306-A2.

XX 24-JAN-2002.

XX 19-JUL-2001; 2001WO-US023035.

XX 19-JUL-2000; 2000US-0219795P.

XX 12-MAR-2001; 2001US-0275251P.

XX (PHMA) PHARMACIA & UPJOHN CO.

XX Van R. Tomaselli AG, Gurney ME, Emmons TL, Bienkowski MJ;

XX Heintzlehn RL;

XX WPI; 2002-216995/27.

XX P-PSDB; ABB06409.

XX Novel substrates for human aspartyl protease useful for identifying

XX modulators of beta secretase activity of aspartyl protease for treating

XX Alzheimer's disease.

XX Claim 1; Page 117; 188pp; English.

XX The present invention describes an isolated peptide (I) comprising a
CC sequence of at least four amino acids, where the peptide is a substrate
CC for conducting aspartyl protease assays. (I) has neuroprotective and
CC neurotropic activities, and can be used as an inhibitor of beta-secretase
CC activity. A beta-secretase modulator from the present invention can be
CC used for inhibiting beta-secretase activity in vivo, and in the
CC manufacture of a medicament for the treatment of Alzheimer's disease.
CC Pharmaceutical compositions from the present invention can be used for
CC treating a disease or condition characterised by an abnormal beta-
CC secretase activity. (I) is useful for identifying agents that modulate
CC the activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as
CC a core structure to construct derivatives. ABL49914 to ABL49925 and
CC ABB06409 to ABB06591 represent sequences used in the exemplification of
CC the present invention

XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL49914 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCCTCGGCTCT      147
```

Sequence name: rngp2ndb:ABL52457

Sequence documentation:

ID ABL52457 standard; cDNA; 2070 BP.

XX ABL52457;

XX 16-JUL-2002 (first entry)

XX Human Asp-2(a) nucleotide sequence SEQ ID NO:3.

XX Human: Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;

XX proteolytic; chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1506

XX FT /tag= a

XX FT /product= "Asp-2(a)"

XX FT /note= "aspartyl protease"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX 22-SEP-2000; 2000GB-00023315.

XX (PHMA) PHARMACIA & UPJOHN CO.

XX Van R. Tomaselli AG, Gurney ME, Emmons TL, Bienkowski MJ;

XX Heintzlehn RL;

XX WPI; 2002-216995/27.

XX P-PSDB; ABB06409.

XX Novel substrates for human aspartyl protease useful for identifying

XX modulators of beta secretase activity of aspartyl protease for treating

XX Alzheimer's disease.

XX Claim 1; Page 117; 188pp; English.

DR WPI: 2002-397167/43.
 DR P-PSDB; ABB78590.
 XX
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 XX protease activity, e.g. for the diagnosis of Alzheimer's disease.
 PS Example 2; Fig 2; 182pp; English.
 XX
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
 CC substrate (1) which comprises a peptide of no more than 50 amino acids,
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
 CC nucleotide sequence that hybridises under stringent conditions to the non
 CC coding strand complementary to a defined 1804 nucleotide sequence (see
 CC AB52456) where the nucleotide sequence encodes a polypeptide having Asp1
 CC proteolytic activity and lacks nucleotides encoding a transmembrane
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that
 CC hybridises under stringent conditions to (III) (the nucleotide sequence
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 CC comprising (III) or (III'); and (5) a host cell (V) transformed or
 CC transfected with (III), (III'), and/or (IV). The hu-Asp1 protease or
 CC substrate (1) may be used as an enzyme substrate in assays to detect
 CC aspartyl protease activity, (II) and therefore diagnose diseases
 CC associated with aberrant hu-Asp1 expression and activity such as
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 CC sequence encodes hu-Asp2(a) from the present invention
 XX
 SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ABL52457 ..
 Alignment segment 1/1: (-)
 Matching length: 32.00 Total length: 264
 Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
 :::::::::::::::::::::
 179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGCTCT 147

PR 24-SEP-1998; 98US-0101594P.
 PR 23-SEP-1999; 98US-00404133.
 PR 23-SEP-1999; 99US-0155493P.
 PR 23-SEP-1999; 99WO-US020881.
 PR 13-OCT-1999; 99US-00416901.
 XX
 PA (PHUA) PHARMACIA & UPJOHN CO.
 XX
 PT Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 XX WPI: 2004-236722/22.
 DR P-PSDB; ADJ94316.
 XX
 PT Identifying agents that modulate activity of Asp2 aspartyl protease
 PT useful for treating or preventing Alzheimer's disease involves comparing
 PT APP processing activity of protease in presence and absence of test
 XX agent.
 XX
 PS Example 2; SEQ ID NO 3; 109pp; English.
 XX
 CC The invention relates to identifying agents that modulate activity of
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 CC precursor protein (APP) in the presence and absence of a test agent,
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
 CC beta, determining APP processing activity of Asp2 in presence and absence
 CC of the test agent, and comparing the activities to identify agents that
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
 CC cell that can be used to screen for inhibitors of beta secretase
 CC activity, novel isoforms of amyloid protein precursor (APP), where the
 CC last 2 carboxy terminal amino acids of that isoform are both lysine
 CC residues (e.g. those designated APP695-KK or carrying the Swedish
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 CC for assaying for beta secretase activity and screening for inhibitors of
 CC beta-secretase) and polynucleotides that encode the APP proteins. The
 CC method is useful for identifying agents that modulate the activity
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl
 CC protease. Preferably, the method is useful for identifying agents that
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 CC precursor protein processing, are useful for treating or preventing
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease of
 CC the invention.
 XX
 SQ Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADJ94315 ..
 Alignment segment 1/1: (-)
 Matching length: 32.00 Total length: 264
 Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
 :::::::::::::::::::::
 179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGCTCT 147

DT 29-UTL-2004 (first entry)
XX Human aspartyl protease (Asp)-2(a) cDNA.
DE Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
XX Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1;
XX ss.
XX Homo sapiens.
OS
XX
FH Key Location/Qualifiers
FT CDS 1..1506
FT /tag= b
FT /product= "Human Asp-2 protein"
FT sig_peptide 1..63
FT /tag= a
FT mat_peptide 64..1503
FT /tag= c
FT /product= "Human mature Asp-2 protein"
XX
XX US6737510-B1.
XX
XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2004-387112/36.
XX P-PSDB; ADO50412.
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
XX involved in processing amyloid precursor protein into amyloid beta,
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease.
XX
XX Example 2; SEQ ID NO 3; 108bp; English.
XX
XX The invention relates to a method for identifying an agent that decreases
XX the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX provides enzyme and enzymatic procedures for cleaving the beta secretase
XX cleavage site of the amyloid precursor protein (APP). The invention is
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease. It is also useful in gene therapy. The present sequence is human
XX Asp-2 cDNA. Human Asp-2 gene is located at chromosome 11q23.3-24.1. This
XX sequence is used to illustrate the method of the invention.
XX
XX Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADO50411 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Matching length: 32.00
XX Matching Percent Similarity: 81.82
XX Total Percent Similarity: 81.82
XX Gaps: 0
XX
XX Matching length: 11
XX Matching Percent Identity: 54.55
XX Total Percent Identity: 54.55
XX
XX Alignment:
XX
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
XX ::::::::::::::::::::|::::::::::| 147
XX 179 AAGCTGCGCCCTCGGCGGCGGCTCTCGGCGCTCT

Sequence name: rngp2nrb:ADR75324
Sequence documentation:
ID ADR75324 standard; cDNA; 2070 BP.
XX
XX ADR75324;
XX
XX 18-NOV-2004 (first entry)
XX
XX Human aspartyl protease (Asp)-2(a) cDNA.
DE
XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
XX chromosome identification; Alzheimer's disease; human; gene; ss.
XX
XX Homo sapiens.
OS
XX
FH Key Location/Qualifiers
FT CDS 1..1506
FT /tag= b
FT /product= "Human Asp-2 protein"
FT sig_peptide 1..63
FT /tag= a
FT mat_peptide 64..1503
FT /tag= c
FT /product= "Human mature Asp-2 protein"
XX
XX US2004166507-A1.
XX
XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 13-OCT-1999; 99US-00416901.
XX
XX (GURN/) GURNEY M E.
XX (BIEN/) BIENKOWSKI M J.
XX (HEIN/) HEINRICHSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2004-624916/60.
XX P-PSDB; ADR75325.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
XX aspartyl protease activity involved in processing amyloid precursor
XX protein into amyloid beta, useful in identifying agent decreasing
XX activity of aspartyl protease.
XX
XX Claim 1; SEQ ID NO 3; 107bp; English.
XX
XX The invention relates to nucleic acid sequences encoding aspartyl
XX protease (Asp) polypeptides having aspartyl protease activity involved in
XX processing amyloid precursor protein (APP) into amyloid beta. The
XX invention also relates to a method for identifying an agent that
XX decreases the protease activity of the Asp. Asp DNA is useful in
XX chromosome identification as they can hybridize with a specific location
XX on a human chromosome and in identifying the relationship between genes
XX and diseases (particular gene responsible for causing diseases). It is
XX also useful for identifying candidates to modulate the progression of
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX in diagnostic assay for detecting hu-Asp polypeptide expression. The
XX present sequence is the human Asp-2(a) cDNA. This sequence is used to
XX illustrate the method of the invention.
XX
XX Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADR75324 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	264
Matching length:	11	Matching Percent Identity:	11
Matching Percent Similarity:	81.82	Total Percent Identity:	54.55
Total Percent Similarity:	81.82		
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla
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179 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT
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Sequence name: rngp2ndb:AAV41696

Sequence documentation:

ID AAV41696 standard; cDNA; 2541 BP.

XX AAV41696;

XX 26-OCT-1998 (first entry)

XX Nucleotide sequence of human ASP2 (aspartic protease 2).

XX Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;

XX antibody; inhibition; Alzheimer's disease; cancer; proteinase;

XX prothormone processing; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1506

XX /tag= a

XX /product= "human ASP2"

XX EP855444-A2.

XX 29-JUL-1998.

XX 27-JAN-1998; 98BP-00300573.

XX 28-JAN-1997; 97GB-00001684.

XX (SMIK) SMITHKLINE BEECHAM PLC.

XX (SMIK) SMITHKLINE BEECHAM CORP.

XX Powell DJ, Smith TS, Chapman CG, Murphy K;

XX WPI; 1998-389809/34.

XX P-PSDB; AAM59807.

XX New nucleic acid encoding human aspartic protease 2 - used to treat,

XX prevent and diagnose e.g. Alzheimer's disease, cancer and prothormone

XX processing.

XX Claim 2; Page 6-7; 26pp; English.

XX This is the nucleotide sequence of the human ASP2 (aspartic protease 2),

XX used in the method of the invention. Agonists and antagonists for ASP2

XX immunospecific antibodies are used to treat conditions requiring

XX increased or decreased activity or expression of ASP2 respectively. ASP2

XX is used to treat and diagnose e.g. Alzheimer's disease, cancer and

XX prothormone processing and ASP2 or a fragment can be used to induce an

XX immune response against the above conditions

XX Sequence 2541 BP; 598 A; 673 C; 675 G; 579 T; 0 U; 16 Other;

XX Alignment of: us-10-726-967a-1 x AAV41696 ..

XX Alignment segment 1/1: (-)

XX Quality: 32.00

XX Score: 264

Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT
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Sequence name: rngp2ndb:AAS82237

Sequence documentation:

ID AAS82237 standard; cDNA; 2907 BP.

XX AAS82237;

XX 13-FEB-2002 (first entry)

XX DNA encoding novel human diagnostic protein #18041.

XX Human; chromosome mapping; gene mapping; gene therapy; forensic;

XX food supplement; medical imaging; diagnostic; genetic disorder; ss.

XX Homo sapiens.

XX WO200175067-A2.

XX 11-OCT-2001.

XX 30-MAR-2001; 2001WO-US008631.

XX 31-MAR-2000; 2000US-00540217.

XX 23-AUG-2000; 2000US-00649167.

XX (HYSE-) HYSEQ INC.

XX Dmanac RT, Liu C, Tang YT;

XX WPI; 2001-639362/73.

XX P-PSDB; ABG18050.

XX New isolated polynucleotide and encoded polypeptides, useful in

XX diagnostics, forensics, gene mapping, identification of mutations

XX responsible for genetic disorders or other traits and to assess

XX biodiversity.

XX Claim 1; SEQ ID NO 18041; 103pp; English.

XX The invention relates to isolated polynucleotide (I) and polypeptide (II)

XX sequences. (I) is useful as hybridisation probes, polymerase chain

XX reaction (PCR) primers, oligomers, and for chromosome and gene mapping,

XX and in recombinant production of (II). The polynucleotides are also used

XX in diagnostics as expressed sequence tags for identifying expressed

XX genes. (I) is useful in gene therapy techniques to restore normal

XX activity of (II) or to treat disease states involving (II). (II) is

XX useful for generating antibodies against it, detecting or quantitating a

XX polypeptide in tissue, as molecular weight markers and as a food

XX supplement. (II) and its binding partners are useful in medical imaging

XX of sites expressing (II). (I) and (II) are useful for treating disorders

XX involving aberrant protein expression or biological activity. The

XX polynucleotide and polynucleotide sequences have applications in

XX diagnostics, forensics, gene mapping, identification of mutations

XX responsible for genetic disorders or other traits to assess biodiversity

XX and to produce other types of data and products dependent on DNA and

XX amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic

XX coding sequences of the invention. Note: The sequence data for this

XX patent did not appear in the printed specification, but was obtained in

XX electronic format directly from WIPO at

XX ftp.wipo.int/pub/published_pct_sequences

XX Sequence 2907 BP; 623 A; 801 C; 811 G; 672 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS62237 ..

Alignment segment 1/1: (+)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
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2729 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 2761
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Sequence name: rngp2ndb:AAS73798

Sequence documentation:

ID AAS73798 standard; cDNA; 2914 BP.

XX AAS73798;

DT 13-FEB-2002 (first entry)

XX DNA encoding novel human diagnostic protein #9602.

XX Human: chromosome mapping; gene mapping; gene therapy; forensic;

XX food supplement; medical imaging; diagnostic; genetic disorder; ss.

OS Homo sapiens.

XX WO200175067-A2.

PD 11-OCT-2001.

XX 30-MAR-2001; 2001WO-US008631.

XX 31-MAR-2000; 2000US-00540217.

PR 23-AUG-2000; 2000US-00649167.

XX (HYSE-) HYSEQ INC.

PI Dmanac RT, Liu C, Tang YT;

XX WPI; 2001-639362/73.

DR P-PSDB; ABG09611.

XX New isolated polynucleotide and encoded polypeptides, useful in

PT diagnostics, forensics, gene mapping, identification of mutations

PT responsible for genetic disorders or other traits and to assess

PT biodiversity.

XX Claim 1; SEQ ID NO 9602; 103bp; English.

XX The invention relates to isolated polynucleotide (I) and polypeptide (II)

XX sequences. (I) is useful as hybridisation probes, polymerase chain

XX reaction (PCR) primers, oligomers, and for chromosome and gene mapping,

XX and in recombinant production of (II). The polynucleotides are also used

XX in diagnostics as expressed sequence tags for identifying expressed

XX genes. (I) is useful in gene therapy techniques to restore normal

XX activity of (II) or to treat disease states involving (II). (II) is

XX useful for generating antibodies against it, detecting or quantitating a

XX polypeptide in tissue, as molecular weight markers and as a food

XX supplement. (II) and its binding partners are useful in medical imaging

XX of sites expressing (II). (I) and (II) are useful for treating disorders

XX involving aberrant protein expression or biological activity. The

XX polypeptide and polynucleotide sequences have applications in

XX diagnostics, forensics, gene mapping, identification of mutations

XX responsible for genetic disorders or other traits to assess biodiversity

XX and to produce other types of data and products dependent on DNA and

XX amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic

CC coding sequences of the invention. Note: The sequence data for this

CC patent did not appear in the printed specification, but was obtained in

CC electronic format directly from WIPO at

CC ftp.wipo.int/pub/published_pct_sequences

XX SQ Sequence 2914 BP; 675 A; 814 C; 801 G; 624 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS73798 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147
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Sequence name: rngp2ndb:AAF28101

Sequence documentation:

ID AAF28101 standard; DNA; 3252 BP.

XX AAF28101;

DT 02-APR-2001 (first entry)

XX Memapsin 2 DNA.

XX Memapsin 2, catalyst; Alzheimer's; ds.

OS Homo sapiens.

XX WO200100663-A2.

PD 04-JUN-2001.

XX 27-JUN-2000; 2000WO-US017661.

XX 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-0177836P.

PR 27-JUN-2000; 2000US-0178368P.

PR 08-JUN-2000; 2000US-0210292P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PA Tang JUN, Lin X, Koelsch G;

XX WPI; 2001-102885/11.

DR Purified recombinant catalytically active memapsin 2, used to screen

PT inhibitors of it, which are used to treat and prevent Alzheimer's

PT disease.

XX Example 1; Page 71-72; 86pp; English.

XX The present invention relates to a purified recombinant catalytically

XX active memapsin 2. The invention may be used for isolating inhibitors

XX which are used to treat or prevent Alzheimer's disease. The invention may

XX also be used to screen for individuals more genetically prone to develop

XX Alzheimer's disease

XX Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;

XX Alignment of: us-10-726-967a-1 x AAF28101 ..

XX Alignment segment 1/1: (-)

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
      |||||
140 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 108
```

Sequence name: rngp2ndb:ABK88641

Sequence documentation:
ID ABK88641 standard; cDNA; 3252 BP.

AC ABK88641;

DT 07-OCT-2002 (first entry)

DE cDNA encoding human memapsin 2.

XX Human; memapsin 2; beta secretase; aspartic protease; APP;
KM beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;
KM neuroprotective; nootropic; expressed sequence tag; EST; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1467

FT /*tag= a

FT /product= "Memapsin 2"

FT /note= "This sequence lacks a start codon"

FT US2002049303-A1.

PN 25-APR-2002.

PD 28-FEB-2001; 2001US-00796264.

XX 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-017836P.

PR 27-JUN-2000; 2000US-017836P.

PR 27-JUN-2000; 2000US-00604608.

XX (TANG/) TANG J J N.

XX (LINX/) LIN X.

XX (KOEL/) KOELSCH G.

XX (HONG/) HONG L.

XX Tang JUN, Lin X, Koelsch G, Hong L;

XX WPI; 2002-507280/54.

XX P-PSDB; AAU99488.

XX New recombinant catalytically active memapsin 2, useful to screen for

XX inhibitors of memapsin 2 which can be used to prevent and treat

XX Alzheimer's disease.

XX Example 1; Page 20-21; 44p; English.

XX The present invention relates to methods for the production of purified,

XX recombinant catalytically active, memapsin 2 (beta secretase). Memapsin

XX 2, a member of the aspartic protease family, cleaves beta-amyloid

XX precursor protein (APP) found in amyloid plaques. The recombinant

XX memapsin 2 is useful for identifying inhibitors of memapsin 2 in the

XX design of drugs for the treatment and/or prevention of Alzheimer's

XX

XX

XX

XX

XX

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XX

CC disease. The recombinant memapsin 2 can be used to immunise against

CC Alzheimer's disease. The present sequence encodes human memapsin 2

XX Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;

SQ Alignment of: us-10-726-967a-1 x ABK88641 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
      |||||
140 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 108
```

Sequence name: rngp2ndb:ABX11591

Sequence documentation:
ID ABX11591 standard; cDNA; 3252 BP.

AC ABX11591;

DT 01-MAY-2003 (first entry)

DE Human partial cDNA encoding memapsin 2.

XX Human; ss; memapsin 2; beta-secretase; beta-amyloid precursor protein;

XX beta-amyloid peptide; Alzheimer's disease; nootropic; neuroprotective.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1467

FT /*tag= a

FT /product= "Memapsin 2"

FT /note= "No start codon shown"

FT US2002164760-A1.

PN 07-NOV-2002.

PD 28-FEB-2001; 2001US-00795903.

XX 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-017836P.

PR 27-JUN-2000; 2000US-017836P.

PR 27-JUN-2000; 2000US-0210292P.

PR 27-JUN-2000; 2000US-00604608.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX Lin X, Koelsch G, Tang JUN;

XX WPI; 2003-255218/25.

XX P-PSDB; ABG76101.

XX New purified recombinant catalytically active memapsin 2 (beta-

XX secretase), useful for designing and screening of specific inhibitors for

XX the diagnosis, prevention and/or treatment of Alzheimer's disease.

XX Example 1; Page 20-21; 44p; English.

XX The invention relates to a purified recombinant catalytically active

XX memapsin 2, a beta-secretase which produces the beta-amyloid peptide from

XX the beta amyloid precursor protein. Also included are producing the above

XX

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XX

XX

PR 17-MAR-2000; 2000US-0190076P.
PR 18-APR-2000; 2000US-0198123P.
PR 19-MAY-2000; 2000US-0205515P.
PR 07-JUN-2000; 2000US-0209467P.
PR 28-JUN-2000; 2000US-0214886P.
PR 30-JUN-2000; 2000US-0215135P.
PR 07-JUL-2000; 2000US-0216647P.
PR 07-JUL-2000; 2000US-0216880P.
PR 11-JUL-2000; 2000US-0217487P.
PR 11-JUL-2000; 2000US-0217496P.
PR 14-JUL-2000; 2000US-0218290P.
PR 26-JUL-2000; 2000US-0220363P.
PR 26-JUL-2000; 2000US-0220364P.
PR 14-AUG-2000; 2000US-0224518P.
PR 14-AUG-2000; 2000US-0225213P.
PR 14-AUG-2000; 2000US-0225214P.
PR 14-AUG-2000; 2000US-0225266P.
PR 14-AUG-2000; 2000US-0225267P.
PR 14-AUG-2000; 2000US-0225268P.
PR 14-AUG-2000; 2000US-0225270P.
PR 14-AUG-2000; 2000US-0225447P.
PR 14-AUG-2000; 2000US-0225757P.
PR 14-AUG-2000; 2000US-0225758P.
PR 14-AUG-2000; 2000US-0225759P.
PR 18-AUG-2000; 2000US-0226279P.
PR 22-AUG-2000; 2000US-0226681P.
PR 22-AUG-2000; 2000US-0226686P.
PR 23-AUG-2000; 2000US-0227182P.
PR 23-AUG-2000; 2000US-0227009P.
PR 30-AUG-2000; 2000US-0228924P.
PR 01-SEP-2000; 2000US-0229287P.
PR 01-SEP-2000; 2000US-0229343P.
PR 01-SEP-2000; 2000US-0229344P.
PR 01-SEP-2000; 2000US-0229345P.
PR 05-SEP-2000; 2000US-0229509P.
PR 05-SEP-2000; 2000US-0229513P.
PR 06-SEP-2000; 2000US-0230437P.
PR 06-SEP-2000; 2000US-0230438P.
PR 08-SEP-2000; 2000US-0231242P.
PR 08-SEP-2000; 2000US-0231243P.
PR 08-SEP-2000; 2000US-0231244P.
PR 08-SEP-2000; 2000US-0231413P.
PR 08-SEP-2000; 2000US-0231414P.
PR 08-SEP-2000; 2000US-0232080P.
PR 08-SEP-2000; 2000US-0232081P.
PR 12-SEP-2000; 2000US-0231968P.
PR 14-SEP-2000; 2000US-0232397P.
PR 14-SEP-2000; 2000US-0232398P.
PR 14-SEP-2000; 2000US-0232399P.
PR 14-SEP-2000; 2000US-0232400P.
PR 14-SEP-2000; 2000US-0232401P.
PR 14-SEP-2000; 2000US-0233063P.
PR 14-SEP-2000; 2000US-0233064P.
PR 14-SEP-2000; 2000US-0233065P.
PR 21-SEP-2000; 2000US-0234223P.
PR 21-SEP-2000; 2000US-0234274P.
PR 25-SEP-2000; 2000US-0234997P.
PR 25-SEP-2000; 2000US-0234998P.
PR 26-SEP-2000; 2000US-0235834P.
PR 27-SEP-2000; 2000US-0235834P.
PR 27-SEP-2000; 2000US-0235836P.
PR 29-SEP-2000; 2000US-0236327P.
PR 29-SEP-2000; 2000US-0236367P.
PR 29-SEP-2000; 2000US-0236368P.
PR 29-SEP-2000; 2000US-0236369P.
PR 29-SEP-2000; 2000US-0236370P.
PR 02-OCT-2000; 2000US-0236802P.
PR 02-OCT-2000; 2000US-0237037P.
PR 02-OCT-2000; 2000US-0237038P.
PR 02-OCT-2000; 2000US-0237039P.
PR 02-OCT-2000; 2000US-0237040P.
PR 13-OCT-2000; 2000US-0239935P.

PR 13-OCT-2000; 2000US-0239937P.
PR 20-OCT-2000; 2000US-0240960P.
PR 20-OCT-2000; 2000US-0241221P.
PR 20-OCT-2000; 2000US-0241785P.
PR 20-OCT-2000; 2000US-0241786P.
PR 20-OCT-2000; 2000US-0241787P.
PR 20-OCT-2000; 2000US-0241808P.
PR 20-OCT-2000; 2000US-0241809P.
PR 20-OCT-2000; 2000US-0241826P.
PR 01-NOV-2000; 2000US-0244617P.
PR 08-NOV-2000; 2000US-0246474P.
PR 08-NOV-2000; 2000US-0246475P.
PR 08-NOV-2000; 2000US-0246476P.
PR 08-NOV-2000; 2000US-0246477P.
PR 08-NOV-2000; 2000US-0246478P.
PR 08-NOV-2000; 2000US-0246523P.
PR 08-NOV-2000; 2000US-0246524P.
PR 08-NOV-2000; 2000US-0246525P.
PR 08-NOV-2000; 2000US-0246526P.
PR 08-NOV-2000; 2000US-0246527P.
PR 08-NOV-2000; 2000US-0246528P.
PR 08-NOV-2000; 2000US-0246532P.
PR 08-NOV-2000; 2000US-0246509P.
PR 08-NOV-2000; 2000US-0246610P.
PR 08-NOV-2000; 2000US-0246611P.
PR 08-NOV-2000; 2000US-0246613P.
PR 17-NOV-2000; 2000US-0249207P.
PR 17-NOV-2000; 2000US-0249208P.
PR 17-NOV-2000; 2000US-0249209P.
PR 17-NOV-2000; 2000US-0249210P.
PR 17-NOV-2000; 2000US-0249211P.
PR 17-NOV-2000; 2000US-0249212P.
PR 17-NOV-2000; 2000US-0249213P.
PR 17-NOV-2000; 2000US-0249214P.
PR 17-NOV-2000; 2000US-0249215P.
PR 17-NOV-2000; 2000US-0249216P.
PR 17-NOV-2000; 2000US-0249217P.
PR 17-NOV-2000; 2000US-0249218P.
PR 17-NOV-2000; 2000US-0249244P.
PR 17-NOV-2000; 2000US-0249245P.
PR 17-NOV-2000; 2000US-0249246P.
PR 17-NOV-2000; 2000US-0249265P.
PR 17-NOV-2000; 2000US-0249297P.
PR 17-NOV-2000; 2000US-0249299P.
PR 17-NOV-2000; 2000US-0249300P.
PR 01-DEC-2000; 2000US-0250160P.
PR 01-DEC-2000; 2000US-0250391P.
PR 05-DEC-2000; 2000US-0251030P.
PR 05-DEC-2000; 2000US-0251988P.
PR 05-DEC-2000; 2000US-0256719P.
PR 06-DEC-2000; 2000US-0251479P.
PR 06-DEC-2000; 2000US-0251856P.
PR 06-DEC-2000; 2000US-0251868P.
PR 06-DEC-2000; 2000US-0251869P.
PR 08-DEC-2000; 2000US-0251899P.
PR 08-DEC-2000; 2000US-0251990P.
PR 08-DEC-2000; 2000US-0251990P.
PR 11-DEC-2000; 2000US-0254097P.
PR 05-JAN-2001; 2001US-0259678P.
XX
XX
PA (HUMA-) HUMAN GENOME SCI INC.
XX
XX Rosen CA, Barash SC, Ruben SM;
PI
DR WPI; 2001-465566/50.
XX P-PSDB; AAU23068.
XX
PT Novel polypeptides and polynucleotides useful for diagnosing, preventing,
PT treating neural, immune system, muscular, reproductive, pulmonary,
PT cardiovascular, renal, proliferative disorders and cancerous diseases.
XX
XX
XX Claim 4; SEQ ID NO 164; 1180bp; English.
XX
CC The present invention relates to the isolation of novel human enzyme

PA	(YANR//) YAN R.
XX	
P1	Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX	
DR	WPI; 2001-502548/55.
XX	
P7	P-PSDB; AAU07214.
PT	
PT	Novel purified polypeptide comprising fragment of mammalian aspartyl
PT	protease 2, lacking Asp2 transmembrane domain and retaining beta
PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT	activity.
PS	
PS	Example 9; Page 158; 18spp; English.
XX	
CC	The invention relates to a novel purified polypeptide comprising a
CC	fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC	Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC	and the fragment retain the beta-secretase activity of the mammalian Asp2
CC	protein. Also included is an isoform of amyloid precursor (APP)
CC	comprising the amino acid sequence of a APP or its fragment containing an
CC	APP cleavage site recognizable by a mammalian beta-secretase, and further
CC	comprising two lysine residues at the carboxyl terminus of the amino acid
CC	sequence of the mammalian APP or APP fragment. The polypeptides are used
CC	for assaying for modulators of beta-secretase activity; identifying
CC	agents that inhibit the APP processing agents that modulate the activity of
CC	protease (Hu-Ap2); identifying agents that modulate the activity of
CC	and for reducing cellular production of amyloid-beta (Abeta) from APP.
CC	Agents identified by the above methods are useful for treating
CC	Alzheimer's disease, and for identifying modulators of amyloid-beta
CC	(Abeta) peptide production, for use in designing therapeutics for the
CC	treatment or prevention of Alzheimer's disease. Probes and primers
CC	derived from APP nucleic acid sequences are useful for detecting Hu-APP
CC	nucleic acids in vitro assays and in Northern and Southern blots. The
CC	present sequence represents the coding sequence of T7-caspase-caspase 8-
CC	human-APP-2a delta TM construct which has a T7 tag, a caspase 8 leader
CC	sequence and cleavage site, and lacks the transmembrane domain. This
CC	construct was used for bacterial expression and purification of human
CC	Asp2a. (Updated on 11-SEP-2003 to standardise OS field)
SQ	
SQ	Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
	Alignment of: uc-10-726-967a-1 x AAS11714 ..
	Alignment segment 1/1: (+)
	Matching length: 28..00 Total length: 277
	Matching Percent Similarity: 83..33 Matching Percent Identity: 58..33
	Total Percent Similarity: 62..50 Total Percent Identity: 43..75
	Gaps: 1
	Alignment:
	27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
	1170 CGCTTGCCATCGCACGATGAAGTTTCACGACGCAGCGTGGAAAGGCC 1217
	Sequence name: rmgp2ndb:AAD17877
	Sequence documentation:
ID	AAD17877 standard; cDNA; 1278 BP.
XX	
AC	AAD17877;
XX	
DT	10-DEC-2001 (first entry)
XX	
DE	T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) lacking TM domain cDNA.
XX	
KW	Human; aspartyl protease 1; App1; amyloid precursor protein; APP;
KW	Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW	amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;
KW	T7-Caspase-Caspase 8 cleavage-Human-Pro-Asp 2(a) protein; ss.
XX	

[illegible]

XX	AD13033	standard; cDNA; 1278 BP.
XX	AC	AA13033;
XX	DT	23-OCT-2001 (first entry)
XX	DE	T7-Caspase-Caspase 8 cleavage-Human-pro-Asp2(a) deltatm protein cDNA.
XX	KW	Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP
KW	KW	beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW	KW	neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KW	KW	neuroprotective; antisense therapy; gene therapy;
XX	OS	caspase-caspase 8 cleavage-pro-Asp2(a) deltatm protein; ss.
XX	OS	Homo sapiens.
XX	OS	Synthetic.
XX	FT	Key
XX	FT	CDS
XX	FT	Location/Qualifiers
XX	FT	1..1278
XX	FT	/*tag= a
XX	FT	/product= "T7-Caspase-Caspase 8 cleavage-Human-pro-
XX	FT	Asp2(a) deltatm protein"
XX	PN	WO200150829-A2.
XX	PD	19-JUL-2001.
XX	PF	09-MAY-2001; 2001WO-IB000799.
XX	PR	09-MAY-2001; 2001WO-IB000799.
XX	PA	(BIEN/) BIENKOWSKI M J.
XX	PA	(GURN/) GURNEY M E.
XX	PA	(HEIN/) HEINRIKSON R L.
XX	PA	(PARO/) PARODI L A.
XX	PA	(YANR/) YAN R.
XX	P1	Blankowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX	XX	WPI; 2001-483072/52.
XX	DR	P-PSDB; AAE06871.
XX	PT	Novel purified polypeptide comprising fragment of mammalian aspartyl
XX	PT	protease 2, lacking Asp2 transmembrane domain and retaining beta
XX	PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX	PT	activity.
XX	XX	Example 9; Page 158; 185pp; English.
XX	PS	The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX	CC	precursor protein (APP) isoforms and their corresponding DNA molecules.
XX	CC	Human aspartyl proteases can act as beta-secretase proteases useful for
XX	CC	treating Alzheimer's disease. APP isoforms are useful for identifying
XX	CC	modulators of amyloid-beta peptide production, for use in designing
XX	CC	therapeutics for the treatment and prevention of Alzheimer's disease,
XX	CC	dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX	CC	and neuronal loss. APP isoforms are also used in methods for identifying
XX	CC	inhibitors and modulators of human Asp2 activity. The invention relates
XX	CC	to a method for identifying agents that modulate the activity of human
XX	CC	aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX	CC	as a means to screen in cellular assays for the inhibitors of beta- and
XX	CC	gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX	CC	polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX	CC	Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX	CC	The present cDNA sequence encodes T7-Caspase-Caspase 8 cleavage-Human-
XX	CC	pro-aspartyl protease 2a (Asp2a) deltatm protein which is obtained by the
XX	CC	addition of T7 tag and caspase 8 leader sequence at the N-terminal end
XX	CC	and deletion of the transmembrane domain at the C-terminal end of Hu-
XX	CC	Asp2a. Human Asp2a has beta-secretase activity
XX	XX	
XX	Sequence	1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA13033 ..

```

Alignment segment 1/1: (+)

      .      Quality: 28.00      EScore: 277
      .      Matching Length: 12      Total Length: 16
      .      Matching Percent Similarity: 83.33      Matching Percent Identity: 58.33
      .      Total Percent Similarity: 62.50      Total Percent Identity: 43.75
      .      Gaps: 1

Alignment:
      27 ArgLeuPro.....LeuArgSerQjYLeuGjYgJYAlaPro      38
      |||||.....|:|||||.....|
      1170 CGCTTCCAAVGTGCACAGATGAGTTCAGACGGCAGCGGTGGAAGGCC      1217

Sequence name: rmgp2ndb:AAD06751

Sequence documentation:
ID      AAD06751 standard; cDNA; 1278 BP.
XX
AC      AAD06751;
XX
DT      10-AUG-2001 (first entry)
XX
DE      T7-Caspase-Caspase 8-cleavage-human-pro-Asp-2(a) delta TM protein cDNA.
XX
KW      Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW      Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
KW      beta-secretase; caspase-caspase 8-Asp-2a delta TM; ss.
XX
OS      Homo sapiens.
XX
OS      Synthetic.
XX
FH      Key      Location/Qualifiers
FT      CDS      1..1278
FT      /tag= a
FT      /product= "T7-Caspase-Caspase 8-cleavage-human-pro- Asp
FT      2(a) delta TM protein"
XX
PN      WO200123533-A2.
XX
PD      05-APR-2001.
XX
PF      22-SEP-2000; 2000OWO-US026080.
XX
PR      23-SEP-1999; 99US-0155493P.
XX      23-SEP-1999; 99WO-US020881.
XX      13-OCT-1999; 99US-00416901.
XX      06-DEC-1999; 99US-0169232P.
XX
PA      (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI      Gurney M, Bienkowski MJ;
XX
DR      WPI; 2001-290516/30.
XX
PS      P-PSDB; AAE02593.
XX
PT      Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX      protein, useful for the treatment of Alzheimer's disease.
XX
XX      Example 9; Page 157; 189pp; English.
XX
XX      The present invention relates to enzymes for cleaving the alpha-
XX      secretase site of the amyloid precursor protein (APP) and methods of
XX      identifying those enzymes. The methods may be used to identify enzymes
XX      that may be used to cleave the alpha-secretase cleavage site of the APP
XX      protein. The enzymes may be used to treat or modulate the progress of
XX      Alzheimer's disease. The present sequence is a cDNA encoding human
XX      aspartyl protease 2a (Asp-2a) caspase-caspase 8-deltaTM protein which is
XX      obtained by deleting the transmembrane domain and adding a T7-caspase
XX      leader sequence at the N-terminal end. This sequence has beta-secretase
XX      protease activity.

```

SO Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06751 ..

Alignment segment 1/1: (+)
Quality: 28.00
Matching length: 12
Matching Percent Identity: 83.33
Total Percent Similarity: 62.50
Total Percent Identity: 43.75
Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
1170 CGCTTGCCATGTGCAAGTTCAGACGCGCGGTGGAAGCC 1217

Sequence name: rngp2ndb: AAS11529

Sequence documentation:
ID AAS11529 standard; cDNA; 1278 BP.

AC AAS11529;
XX
XX 24-OCT-2001 (first entry)
XX
XX T7-Caspase-caspase-8-Human-pro-Asp 2(a) delta TM fusion protein cDNA.

XX Human; Aspartyl protease; beta-secretase; notropic; ASP2;
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW amyloid-beta; Abeta; T7-Caspase-caspase 8-Human-pro-Asp 2(a) delta TM;
KM 88.

XX Homo sapiens.
OS Synthetic.

XX Location/Qualifiers
FH Key 1..1278
FT CDS
FT /tag= a
FT /product= "T7-Caspase-caspase 8-Human-pro-Asp 2(a) delta
FT TM fusion protein"

FT sig_peptide
FT /tag= b
FT /note= "Caspase leader sequence"
FT mat_peptide
FT /label= Mature_Asp_2(a)
FT /note= "Also encodes 5 extra N-terminal amino acids
FT constituting a caspase 8 cleavage site"

XX WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000798.

XX 09-MAY-2001; 2001WO-IB000798.

XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI, 2001-502549/55.

XX P-PSDB; AAU06615.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.

XX Example 9; Page 158; 185pp; English.

PS The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the Asp proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-
XX beta (Abeta) peptide production. APP is also useful in designing
XX therapeutics for the treatment or prevention of Alzheimer's disease. APP
XX comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is
XX associated with increased levels of Abeta processing is useful in assays
XX relating the Alzheimer's research. The expression vector is useful for
XX recombinantly expressing APP. Nucleic acids that hybridise to Asp
XX oligonucleotides are useful as probes or primers. The probes are useful
XX for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
XX Southern blots. The present sequence encodes T7-Caspase- caspase 8-Human-
XX pro-Asp 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid
XX purification when expressed in E. coli, a Caspase leader sequence and a
XX caspase 8 cleavage signal to aid cleavage of the signal peptide

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11529 ..

Alignment segment 1/1: (+)
Quality: 28.00
Matching length: 12
Matching Percent Identity: 83.33
Total Percent Similarity: 62.50
Total Percent Identity: 43.75
Gaps: 1

Alignment:
27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
1170 CGCTTGCCATGTGCAAGTTCAGACGCGCGGTGGAAGCC 1217

Sequence name: rngp2ndb: ABL52469

Sequence documentation:
ID ABL52469 standard; cDNA; 1278 BP.

XX ABL52469;

XX 16-JUL-2002 (first entry)

XX T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)deltaTM nucleotide.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
XX amyloid precursor protein; APP; gene; ss.

XX Homo sapiens.

XX Location/Qualifiers
FH Key 1..1278
FT CDS
FT /tag= a
FT /product= "T7-caspase-caspase 8 cleavage-human-pro- Asp-
FT 2(a)deltaTM"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.
PF 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99US-0155493P.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX (PHAA) PHARMACIA & UPJOHN CO.
PA Bienkowiecki MJ, Gurney M;
XX WPI; 2004-397167/43.
XX P-PSDB; ABB78602.
XX
XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
XX Example 9; Page 128; 182pp; English.
XX
XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (II) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non-
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III) comprising a sequence that
CC hybridises under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC comprising (III) or (III') and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence encodes a pro-caspase-8 cleavage-human-pro-Asp-2(a)delcatm,
CC which is given in an example from the present invention
XX
SQ Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ABL52469 ..
Alignment segment 1/1: (+)
Quality: 28.00
Matching length: 12 Total length: 277
Matching Percent Similarity: 83.33 Matching Percent Identity: 58.33
Total Percent Similarity: 62.50 Total Percent Identity: 43.73
Gaps: 1
Alignment:
27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
1170 CGCTTGCCATGTCACGATGAGTTCAGACGCGCGGTGGAAGGCC 1217
Sequence name: rngp2ndb:ADJ94339
Sequence documentation:
ID ADJ94339 standard; cDNA; 1278 BP.
XX
AC ADJ94339;
XX
DT 03-JUN-2004 (first entry)

XX Human T7-Caspase-Caspase 8 cleavage-human-pro-Asp-2(a)delcatm cDNA.
DE
XX Human; se; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
KM neurotropic; neuroprotective; amyloid beta; mutant.
XX
OS Homo sapiens.
OS Synthetic.
XX US6706485-B1.
XX
XX 16-MAR-2004.
XX
XX 12-APR-2000; 2000US-00548376.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99US-0155493P.
PR 13-OCT-1999; 99US-00416901.
XX
XX (PHAA) PHARMACIA & UPJOHN CO.
PA Gurney ME, Bienkowiecki MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2004-236722/22.
XX P-PSDB; ADJ94340.
XX
XX Identify agents that modulate activity of Asp2 aspartyl protease
PT useful for treating or preventing Alzheimer's disease involves comparing
PT APP processing activity of protease in presence and absence of test
PT agent.
XX
XX Disclosure; SEQ ID NO 27; 109pp; English.
XX
XX The invention relates to identifying agents that modulate activity of
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
CC precursor protein (APP) in the presence and absence of a test agent,
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence
CC of the test agent, and comparing the activities to identify agents that
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
CC the vector and the method of producing Hu-Asp polypeptides, an isolated
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a
CC cell that can be used to screen for inhibitors of beta secretase
CC activity, novel isoforms of amyloid protein precursor (APP), where the
CC last 2 carboxy terminus amino acids of that isoform are both lysine
CC residues (e.g. those designated APP695-KK or carrying the Swedish
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw
CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
CC for assaying for beta secretase activity and screening for inhibitors of
CC beta-secretase) and polynucleotides that encode the APP proteins. The
CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing, are useful for treating or preventing
CC Alzheimer's disease. The present sequence encodes an aspartyl protease
CC caspase construct (e.g. lacking a transmembrane domain and/or including a
CC caspase cleavage site) used to investigate the cleavage activity of Asp2
XX proteins.
XX
SQ Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ94339 ..
Alignment segment 1/1: (+)
Quality: 28.00
Score: 277

Matching length: 12 Total length: 16
 Matching Percent Similarity: 83.33 Matching Percent Identity: 58.33
 Total Percent Similarity: 62.50 Total Percent Identity: 43.75
 Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
 |||||
 1170 CGCTTGCCATGTCACAGTACGATTTCAGACGCGCGTGAAGGCC 1217

Sequence name: rngp2ndb:AD050435

Sequence documentation:

ID AD050435 standard; DNA; 1278 BP.

AC AD050435;

XX 29-JUL-2004 (first entry)

XX T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
 KW Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX Unidentified.

OS Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

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XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

Alignment segment 1/1: (+)

Matching length: 28.00 Escore: 277
 Matching Percent Similarity: 83.33 Matching Percent Identity: 58.33
 Total Percent Similarity: 62.50 Total Percent Identity: 43.75
 Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
 |||||
 1170 CGCTTGCCATGTCACAGTACGATTTCAGACGCGCGTGAAGGCC 1217

Sequence name: rngp2ndb:ADR75348

Sequence documentation:

ID ADR75348 standard; DNA; 1278 BP.

AC ADR75348;

XX 18-NOV-2004 (first entry)

XX T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
 KW chromosome identification; Alzheimer's disease; human; caspase; chimeric;
 KW gene; ds.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

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XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

XX Unidentified.

CC decreases the protease activity of the Asp. App DNA is useful in
CC chromosome identification as they can hybridise with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-App polypeptide expression. The
CC present sequence is the T7-Caspase-Caspase 8 cleavage-Human-pro-App-
CC 2(a)deltaTM DNA. This sequence is used to illustrate the method of the
CC invention.

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75348 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	277
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
1170 CGCTGCGCATGTGACGATGAGTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rngp2ndb:ADJ57778

Sequence documentation:

ID ADJ57778 standard; DNA; 1368 BP.

XX ADJ57778;

DT 06-MAY-2004 (first entry)

XX DNA sequence for BACE WT R57K.

XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

KW Alzheimer's disease; ds.

XX Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1368

FT /*tag= a

FT /product= "BACE protein"

XX WO2004011641-A2.

XX 05-FEB-2004.

XX 25-JUL-2003; 2003WO-GB003200.

XX 26-JUL-2002; 2002US-0398681P.

XX (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX WPI; 2004-169242/16.

DR P-PSDB; ADJ57779.

XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-s-type pathology of Down's
PT syndrome.

XX Disclosure; SEQ ID NO 7; 145pp; English.

XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the

CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compound, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-s-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE encoding
CC sequence.

XX Sequence 1368 BP; 293 A; 393 C; 399 G; 283 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ57778 ..

Alignment segment 1/1: (-)

Quality:	28.00	Score:	277
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	45.45
Total Percent Similarity:	81.82	Total Percent Identity:	45.45
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
185 AAGTGCCTTCGCGCGCGGCTCTCGGCTCT 153

Sequence name: rngp2ndb:ADJ57786

Sequence documentation:

ID ADJ57786 standard; DNA; 1386 BP.

XX ADJ57786;

DT 06-MAY-2004 (first entry)

XX DNA sequence for BACE N-Q R57K.

XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

KW Alzheimer's disease; ds.

XX Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1386

FT /*tag= a

FT /product= "BACE protein"

XX WO2004011641-A2.

XX 05-FEB-2004.

XX 25-JUL-2003; 2003WO-GB003200.

XX 26-JUL-2002; 2002US-0398681P.

XX (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX WPI; 2004-169242/16.

DR P-PSDB; ADJ57787.

XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-s-type pathology of Down's
PT syndrome.

XX Disclosure; SEQ ID NO 15; 145pp; English.

XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-s-type pathology of Down's syndrome. The

Alignment segment 1/1: (+)

Quality:	28.00	Score:	277
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
|||
1083 CGCTTGCATGTGCA CGATGAGTTCA GACGGCAGCGGTGGAAGCCCC 1130

Sequence name: rnp2ndb:AAS40938

Sequence documentation:

AC AAS40938

DT 17-DEC-2001 (first entry)

DE cDNA encoding novel human enzyme polypeptide #154.

KM Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;
KM lasease; hyperproliferative disorder; immunodeficiency disorder;
KM autoimmune disorder; neurological disorder; metabolic disorder;
KM inflammatory disorder; cardiovascular disorder; reproductive disorder;
KM blood-related disorder; infectious disorder; gene therapy; cytostatic;
KM anti arthritic; nephrotropic; anticosagulant; sa.

OS Homo sapiens.

PN WO200155301-A2.

PD 02-AUG-2001.

PF 17-JAN-2001; 2001WO-US001239.

PR	31-JAN-2000	2000US-0179065P
PR	04-FEB-2000	2000US-0180628P
PR	24-FEB-2000	2000US-0184664P
PR	02-MAR-2000	2000US-0186350P
PR	16-MAR-2000	2000US-0189874P
PR	17-MAR-2000	2000US-0190076P
PR	16-APR-2000	2000US-0198123P
PR	19-MAY-2000	2000US-0205515P
PR	07-JUN-2000	2000US-0209467P
PR	28-JUN-2000	2000US-0214866P
PR	30-JUN-2000	2000US-0215135P
PR	07-JUL-2000	2000US-0216647P
PR	07-JUL-2000	2000US-0216880P
PR	11-JUL-2000	2000US-0217487P
PR	11-JUL-2000	2000US-0217496P
PR	14-JUL-2000	2000US-0218290P
PR	26-JUL-2000	2000US-0220963P
PR	26-JUL-2000	2000US-0220964P
PR	14-AUG-2000	2000US-0224518P
PR	14-AUG-2000	2000US-0224519P
PR	14-AUG-2000	2000US-0225213P
PR	14-AUG-2000	2000US-0225214P
PR	14-AUG-2000	2000US-0225266P
PR	14-AUG-2000	2000US-0225267P
PR	14-AUG-2000	2000US-0225268P
PR	14-AUG-2000	2000US-0225270P
PR	14-AUG-2000	2000US-0225477P
PR	14-AUG-2000	2000US-0225757P
PR	14-AUG-2000	2000US-0225768P
PR	14-AUG-2000	2000US-0225759P
PR	18-AUG-2000	2000US-0226219P
PR	22-AUG-2000	2000US-0226681P

[illegible]

CC secretase

XX Sequence 1503 BP; 315 A; 439 C; 426 G; 323 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AAA28279 ..

XX Alignment segment 1/1: (-)

	Quality:	27.00		Score:	280
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

XX Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||::|||
326 AGGAAGGCGTGTGGGCGACCCCC

XX Sequence name: rmp2nhd:AAF83845

XX Sequence documentation:
ID AAF83845 standard; DNA; 1506 BP.

XX AAF83845;

XX 06-AUG-2001 (first entry)

XX Mouse aspartic secretase-2 (mASP-2) encoding DNA.

XX Aspartic secretase-2; mASP-2; Alzheimer's disease; cancer; nootropic;
XX neuroprotective; cytosolatic; ds.

XX Mus musculus.

XX Key Location/Qualifiers

XX CDS 1..1506

XX FT /tag= a

XX FT /product= "mASP-2"

XX WO200136600-A1.

XX 25-MAY-2001.

XX 16-NOV-2000; 2000WC-US031583.

XX 16-NOV-1999; 99US-0165800P.

XX 15-NOV-2000; 2000US-00713158.

XX (SMIK) SMITHKLINE BEECHAM CORP.

XX (SMIK) SMITHKLINE BEECHAM PLC.

XX Zhu Y, Li X, Powell DJ, Christie G;

XX WPI: 2001-343813/36.

XX P-PSDB; AAB84948.

XX New mouse aspartic secretase-2 polypeptide, useful for screening drugs

XX for the prevention and treatment of Alzheimer's disease and cancer.

XX Claim 1; Page 23; 31pp; English.

XX This DNA encodes a mouse aspartic secretase-2 (mASP-2) polypeptide. The

XX mASP-2 polypeptide can be expressed by standard recombinant methodology.

XX mASP-2 can be used to discover drugs for the prevention and treatment of

XX diseases including Alzheimer's, cancer, and prohormone processing

XX dysfunctions, particular where knockout mice are used

XX Sequence 1506 BP; 316 A; 439 C; 427 G; 324 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AAF83845 ..

XX Alignment segment 1/1: (-)

	Quality:	27.00		Score:	280
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

XX Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||::|||
326 AGGAAGGCGTGTGGGCGACCCCC

XX Sequence name: rmp2nhd:AAA15664

XX Sequence documentation:
ID AAA15664 standard; DNA; 2043 BP.

XX AAA15664;

XX 03-AUG-2000 (first entry)

XX Murine aspartyl protease 2 (a) (Asp2) nucleotide sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

XX Alzheimer's disease; beta secretase site; mouse; ss.

XX Mus musculus.

XX WO200017369-A2.

XX 30-MAR-2000.

XX 23-SEP-1999; 99WO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI: 2000-303209/26.

XX P-PSDB; AAY88427.

XX New enzyme designated human aspartase useful in research into Alzheimer's

XX disease is capable of cleaving amyloid protein precursor at the beta

XX secretase site to produce amyloid beta peptide.

XX Example 3; Fig 4; 183pp; English.

XX This sequence represents the murine aspartyl protease 2 (Asp2) nucleotide

XX sequence. The invention relates to a protease (e.g. Asp2) capable of

XX cleaving the beta secretase site of amyloid precursor protein (APP). The

XX protease contains a sequence encoding the amino acid sequence DTG and a

XX sequence encoding DSG or DTG separated by 100-300 amino acids. When

XX mutated the APP gene causes an autosomal dominant form of Alzheimer's

XX disease. APP localises to the cell surface membrane and have a single C-

XX terminal transmembrane domain. Proteolytic processing of APP produces the

XX amyloid beta protein, which is possibly very important in Alzheimer's

XX disease. The invention includes a nucleotide sequence encoding the

XX protease, a vector containing the nucleotide sequence, and a cell line

XX comprising the vector. Methods for screening for inhibitors of beta

XX secretase activity are also given in the invention. The human aspartase

XX protein and nucleotide sequences and the methods for identifying

XX inhibitors of the protease, are useful in the treatment of and research

XX in to Alzheimer's disease

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AAA15664 ..

XX Alignment segment 1/1: (-)

Quality: 27.00 Score: 280
 Matching length: 12 Total length: 12
 Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00
 Total Percent Similarity: 66.67 Total Percent Identity: 50.00
 Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38
 1562 AGGAGACCAACCAGATGTCGTCACGGGCGCTCTCCA 1527

Sequence name: rngp2ndb:AA511704

Sequence documentation:

ID AA511704 standard; DNA; 2043 BP.

AC AA511704;

XX 24-OCT-2001 (first entry)

XX DNA encoding mouse aspartyl protease 2a (Asp-2a).

XX Mouse; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
 KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;
 KM beta-secretase; Alzheimer's disease; de.

XX Mus sp.

FH Key Location/Qualifiers

FT CDS 1..1506

FT sig_peptide 1..63

FT misc_feature 64..135

FT misc_feature 136..171

FT /note= "Pre-propeptide"

FT /tag= d

FT /note= "Propeptide"

FT mat_peptide 172..1503

FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

XX WO200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX BIENKOWSKI MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI, 2001-502548/55.

XX P-PSDB; AA007204.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 PT activity.
 XX Claim 26; Fig 4; 185bp; English.
 XX The invention relates to a novel purified polypeptide comprising a

CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2
 CC protein. Also included is an isoform of amyloid protein precursor (APP)
 CC comprising the amino acid sequence of a APP or its fragment containing an
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further
 CC comprising two lysine residues at the carboxyl terminus of the amino acid
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used
 CC for assaying for modulators of beta-secretase activity; identifying
 CC agents that inhibit the APP processing agents that modulate the activity of Asp2
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
 CC Agents identified by the above methods are useful for treating
 CC Alzheimer's disease, and for identifying modulators of amyloid-beta
 CC (Abeta) peptide production, for use in designing therapeutics for the
 CC treatment or prevention of Alzheimer's disease. Probes and primers
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The
 CC present sequence represents the coding sequence of mouse Asp-2a used in
 CC the methods of the invention

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

SQ Alignment of: us-10-726-967a-1 x AA511704 ..

Alignment segment 1/1: (-)

Quality: 27.00 Score: 280
 Matching length: 12 Total length: 12
 Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00
 Total Percent Similarity: 66.67 Total Percent Identity: 50.00
 Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38
 1562 AGGAGACCAACCAGATGTCGTCACGGGCGCTCTCCA 1527

Sequence name: rngp2ndb:AA017867

Sequence documentation:

ID AA017867 standard; cDNA; 2043 BP.

AC AA017867;

XX 10-DEC-2001 (first entry)

XX Murine aspartyl protease 2(a) [Asp2(a)] cDNA.

XX Murine; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;
 KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
 KM amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;
 KM ss.

XX Mus musculus.

OS Mus musculus.

FH Key Location/Qualifiers

FT CDS 1..1506

FT /tag= a

FT /note= "Murine aspartyl protease 2(a)"

XX GB2357767-A.

XX 04-JUL-2001.

XX 22-SEP-2000; 2000GB-00023315.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHAA) PHARMACIA & UPJOHN CO.
 XX PA Bienkowski MJ, Gurney M;
 XX PI WPI; 2001-444208/48.
 XX DR P-PSDB; AAE10631.
 XX PT Polypeptide comprising fragments of human aspartyl protease with amyloid
 XX PT precursor protein processing activity and alpha-secretase activity, for
 XX PT identifying modulators useful in treating Alzheimer's disease.
 XX PS Example 3; Fig 4; 187pp; English.
 XX CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
 XX CC proteins which lack transmembrane domain or amino terminal domain or
 XX CC cytoplasmic domain and retains alpha-secretase activity and amyloid
 XX CC protein precursor (APP) processing activity. The proteins of the
 XX CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
 XX CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
 XX CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
 XX CC are useful for treating Alzheimer's disease (AD) which causes progressive
 XX CC dementia with consequent formation of amyloid plaques, neurofibrillary
 XX CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
 XX CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
 XX CC with the substrate under acidic conditions and determining the level of
 XX CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
 XX CC murine Asp2(a) protein
 XX SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD17867 ..
 Alignment segment 1/1: (-)
 Matching length: 27.00 Total length: 280
 Matching Percent Similarity: 66.67 Matching Percent Identity: 12
 Total Percent Similarity: 66.67 Total Percent Identity: 50.00
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
 1562 AGGGAACACCCAGATGTCACAGGCGCTCCCA 1527

Sequence name: rngp2ndb: AAD13023

Sequence documentation:
 ID AAD13023 standard; cDNA; 2043 BP.
 XX
 XX AAD13023;
 XX
 XX 23-OCT-2001 (first entry)
 XX
 DE Murine aspartyl protease 2a (murine Asp2a) cDNA.
 XX
 XX Mouse; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
 XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
 XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
 XX neuroprotective; antisense therapy; gene therapy; ss.
 XX
 XX Mus musculus.
 XX
 XX Key Location/Qualifiers
 XX FT CDS 1..1506
 XX FT /tag= a
 XX FT /product= "Murine aspartyl protease 2a"
 XX
 XX PN MO200150829-A2.
 XX
 XX 19-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000799.
 XX PR 09-MAY-2001; 2001MO-IB000799.
 XX
 XX (BIEN/) BIENKOWSKI M J.
 XX (GURN/) GURNEY M E.
 XX (HEIN/) HEINRIKSON R L.
 XX (PARO/) PARODI L A.
 XX (YANR/) YAN R.
 XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
 XX WPI; 2001-483072/52.
 XX DR P-PSDB; AAE06861.
 XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
 XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
 XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
 XX PT activity.
 XX
 XX PS Claim 26; Fig 4; 185pp; English.
 XX
 XX CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
 XX CC precursor protein (APP) isoforms and their corresponding DNA molecules.
 XX CC Human aspartyl proteases can act as beta-secretase proteases useful for
 XX CC treating Alzheimer's disease. APP isoforms are useful for identifying
 XX CC modulators of amyloid-beta peptide production, for use in designing
 XX CC therapeutics for the treatment and prevention of Alzheimer's disease,
 XX CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
 XX CC and neuronal loss. APP isoforms are also used in methods for identifying
 XX CC inhibitors and modulators of human Asp2 activity. The invention relates
 XX CC to a method for identifying agents that modulate the activity of human
 XX CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
 XX CC as a means to screen in cellular assays for the inhibitors of beta- and
 XX CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
 XX CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
 XX CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
 XX CC The present cDNA sequence encodes murine aspartyl protease 2 (murine
 XX CC Asp2), a 'long' form designated as (murine Asp2a) related to the
 XX CC invention
 XX SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AAD13023 ..
 Alignment segment 1/1: (-)
 Matching length: 27.00 Total length: 280
 Matching Percent Similarity: 66.67 Matching Percent Identity: 12
 Total Percent Similarity: 66.67 Total Percent Identity: 50.00
 Gaps: 0
 Alignment:
 27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38
 1562 AGGGAACACCCAGATGTCACAGGCGCTCCCA 1527

Sequence name: rngp2ndb: AAD06741

Sequence documentation:
 ID AAD06741 standard; cDNA; 2043 BP.
 XX
 XX AAD06741;
 XX
 XX 10-AUG-2001 (first entry)
 XX
 DE Murine aspartyl protease 2a (Asp2a) cDNA.
 XX
 XX Murine; alpha-secretase; amyloid precursor protein; APP; therapy;
 XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp 2a;
 XX

1562 AGGAAACCAACCAGATGTGTCACGGGCGTCTCCA

1527

Sequence name: rngp2ndb:ABL52459

Sequence documentation:
ID ABL52459 standard; cDNA; 2043 BP.

AC ABL52459;

DT 16-JUL-2002 (first entry)

DE Mouse Asp-2(a) nucleotide sequence SEQ ID NO:7.

KM Mouse; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;

XX proteolytic; gene; ss.

XX Mus musculus.

FH Key Location/Qualifiers

FT 1..1506

FT /*tag= a

FT /product= "Asp-2(a)"

FT /note= "aspartyl protease"

XX GB2367060-A.

XX 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WC-US020881.

PR 13-OCT-1999; 99US-00415901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX PA Bienkowski MJ, Gurney M;

XX PI WPI; 2002-397167/43.

XX DR P-PSDB; ABB78592.

XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 3; Fig 4; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (I) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52459) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain; (3) a purified polynucleotide (III') comprising a sequence that
CC hybridises under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
CC comprising (III) or (III'), and (5) a host cell (V) transformed or
CC transfected with (III), (III'), and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence encodes mouse Asp-2(a) from the present invention

SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52459 ..

Alignment segment 1/1: (-)

Quality:		27.00		Total length:		280	
Matching	Percent Similarity:	66.67	Matching	Percent Identity:	50.00		
Total	Percent Similarity:	66.67	Total	Percent Identity:	50.00		
Gaps:		0					

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro
 1562 AGGAAACCAACCAGATGTGTCACGGGCGTCTCCA 1527

Sequence name: rngp2ndb:ADJ94319

Sequence documentation:
ID ADJ94319 standard; cDNA; 2043 BP.

AC ADJ94319;

DT 03-JUN-2004 (first entry)

DE Mouse cDNA encoding aspartyl protease 2b, Asp-2b.

KM Mouse; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta.

XX Mus musculus.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WC-US020881.

XX 13-OCT-1999; 99US-00415901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX PA Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX PI WPI; 2004-236722/22.

XX DR P-PSDB; ADJ94320.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

PT useful for treating or preventing Alzheimer's disease involves comparing

PT APP processing activity of protease in presence and absence of test

PT agent.

XX Example 3; SEQ ID NO 7; 109pp; English.

XX The invention relates to identifying agents that modulate activity of
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
CC precursor protein (APP) in the presence and absence of a test agent,
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid
CC beta, determining APP processing activity of Asp2 in presence and absence
CC of the test agent, and comparing the activities to identify agents that
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins
CC for human Asp-1 and Asp-2(b), mouse Asp-2(b), a vector comprising the
CC nucleic acid encoding hu-Asp2 protease sequence, a host cell comprising
CC the vector and the method of producing hu-Asp polypeptide, an isolated
CC antibody that specifically binds to hu-Asp polypeptides, identifying a

cell that can be used to screen for inhibitors of beta secretase activity, novel isoforms of amyloid protein precursor (APP), where the last 2 carboxy terminus amino acids of that isoform are both lysine residues (e.g. those designated APP695-KK or carrying the Swedish mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful for assaying for beta secretase activity and screening for inhibitors of beta-secretase) and polynucleotides that encode the APP protein. The method is useful for identifying agents that modulate the activity (amyloid precursor protein processing activity) of Asp2 aspartyl protease. Preferably, the method is useful for identifying agents that inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid precursor protein processing, are useful for treating or preventing Alzheimer's disease. The present sequence encodes an aspartyl protease of the invention.

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94319 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	280
Matching	Length:	12	Total Length:	12
Percent	Similarity:	66.67	Matching Percent	50.00
Total	Similarity:	66.67	Percent Identity:	50.00
Gaps:		0	Total Percent	Identity:

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro

38

1562 AGGGAACCCAGATGTGTCTCCAGGGCGCTCTCA

1527

Sequence name: rngp2ndb:AD050415

Sequence documentation:

ID AD050415 standard; cDNA; 2043 BP.

XX AC AD050415;

XX DT 29-JUL-2004 (first entry)

XX DE Murine aspartyl protease (Asp)-2 cDNA.

XX KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

XX KW Alzheimer's disease; gene therapy; murine; gene; ss.

XX OS Mus musculus.

XX FT Key Location/Qualifiers

FT CDS 1..1506

FT /tag= a

FT /product= "Murine aspartyl protease (Asp)-2"

XX PN US6737510-B1.

XX PD 18-MAY-2004.

XX PF 12-APR-2000; 2000US-00548373.

XX PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PNUA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

XX P-PSDB; AD050416.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG involved in processing amyloid precursor protein into amyloid beta, useful in preparing a composition for treating or preventing Alzheimer's disease.

XX Example 3; SEQ ID NO 7; 108bp; English.

XX The invention relates to a method for identifying an agent that decreases the protease activity of the aspartyl protease (Asp) polypeptide. It also provides enzyme and enzymatic procedures for cleaving the beta secretase cleavage site of the amyloid precursor protein (APP). The invention is useful in preparing a composition for treating or preventing Alzheimer's disease. It is also useful in gene therapy. The present sequence is murine Asp-2 cDNA. This sequence is used to illustrate the method of the invention.

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050415 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	280
Matching	Length:	12	Total Length:	12
Percent	Similarity:	66.67	Matching Percent	50.00
Total	Similarity:	66.67	Percent Identity:	50.00
Gaps:		0	Total Percent	Identity:

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro

38

1562 AGGGAACCCAGATGTGTCTCCAGGGCGCTCTCA

1527

Sequence name: rngp2ndb:ADR75328

Sequence documentation:

ID ADR75328 standard; cDNA; 2043 BP.

XX AC ADR75328;

XX DT 18-NOV-2004 (first entry)

XX DE Murine aspartyl protease (Asp)-2 cDNA.

XX KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

XX KW chromosome identification; Alzheimer's disease; murine; gene; ss.

XX OS Mus musculus.

XX FT Key Location/Qualifiers

FT CDS 1..1506

FT /tag= a

FT /product= "Murine aspartyl protease (Asp)-2"

XX PN US2004166507-A1.

XX PD 26-AUG-2004.

XX PF 29-AUG-2003; 2003US-00652045.

XX PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN) GURNEY M E

XX (BIEN) BIENKOWSKI M J

XX (HEIN) HEINRIKSON R L

XX (PARO) PARODI L A

XX (YANR) YAN R


```

PF 09-MAY-2001; 2001WO-1B000797.
XX
XX 09-MAY-2001; 2001WO-1B000797.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX P-PSDB; AAU07214.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Page 158; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (APP)
XX comprising the amino acid sequence of a APP or its fragment containing an
XX APP cleavage site recognizable by a mammalian beta-secretase, and further
XX comprising two lysine residues at the carboxyl terminus of the amino acid
XX sequence of the mammalian APP or APP fragment. The polypeptides are used
XX for assaying for modulators of beta-secretase activity; identifying
XX agents that inhibit the APP processing activity of human Asp2 aspartyl
XX protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
XX, and for reducing cellular production of amyloid beta (Abeta) from APP.
XX Agents identified by the above methods are useful for treating
XX Alzheimer's disease, and for identifying modulators of amyloid-beta
XX (Abeta) peptide production, for use in designing therapeutics for the
XX treatment or prevention of Alzheimer's disease. Probes and primers
XX derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
XX nucleic acids in in vitro assays and in Northern and Southern blots. The
XX present sequence represents the coding sequence of T7-caspase-caspase 8-
XX human-Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader
XX sequence and cleavage site, and lacks the transmembrane domain. This
XX construct was used for bacterial expression and purification of human
XX Asp2a. (Updated on 11-SEP-2003 to standardise OS field)
XX
XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAS11714 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Quality: 26.00
XX Matching length: 8
XX Matching Percent Similarity: 87.50
XX Total length: 283
XX Total Percent Identity: 62.50
XX Gaps: 0
XX Total Percent Identity: 62.50
XX
XX Alignment:
XX
XX 31 ArgSerGlyLeuGlyGlyAlaPro 38
XX |||:|||||:|||||:|||||:|
XX 242 AGCAAGCGGCGGGGCGAGCACCC 219
XX
XX Sequence name: rngp2nrb:AA17877
XX
XX Sequence documentation:
XX ID AAD17877 standard: CDNA; 1278 BP.
XX
XX AAD17877;
XX
XX 10-DEC-2001 (first entry)

```

```

XX DE T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) lacking TM domain cDNA.
XX
XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;
XX T7-Caspase-Caspase 8 cleavage-Human-pro-Asp 2(a) protein; ss.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1278
XX FT /*tag= a
XX FT /product= "T7-Caspase-Caspase 8 cleavage-Human-pro- Asp
XX FT 2(a) protein lacking transmembrane domain"
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHMA ) PHARMACIA & UPJOHN CO.
XX
XX Bienkowski MJ, Gurney M;
XX WPI; 2001-444208/48.
XX P-PSDB; AAB10641.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 9; Page 128; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding T7-
XX Caspase-Caspase 8 cleavage-human-pro-Asp 2(a) protein lacking a
XX transmembrane (TM) domain which is generated from human Asp 2(a) protein
XX by the addition of T7 tag and caspase 8 leader sequence at its N-terminal
XX end and deletion of its C-terminal transmembrane domain
XX
XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD17877 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Quality: 26.00
XX Matching length: 8
XX Matching Percent Similarity: 87.50
XX Total length: 283
XX Total Percent Identity: 62.50
XX Gaps: 0
XX Total Percent Identity: 62.50
XX
XX Alignment:

```


CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is a cDNA encoding human
CC Aspartyl protease 2a (Asp-2a) caspase-caspase 8-deltaTM protein which is
CC obtained by deleting the transmembrane domain and adding a T7-caspase
CC leader sequence at the N-terminal end. This sequence has beta-secretase
CC protease activity

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06751 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	283
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro      38
|||||:|||||:|||||:|||||
242 AGGAGGGGTGGTGGGCGACACCC      219
```

Sequence name: rngp2ndb:NAS11529

Sequence documentation:

ID NAS11529 standard; cDNA; 1278 BP.

AC NAS11529;

XX 24-OCT-2001 (first entry)

DE T7-Caspase-caspase-8-Human-pro-Asp 2(a) delta TM fusion protein cDNA.

XX Human; Aspartyl protease; beta-secretase; neurotic; Asp2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

KM amyloid-beta; Abeta; T7-Caspase-caspase 8-Human-pro-Asp 2(a) delta TM;

XX ss.

OS Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1278

FT /tag= a

FT /product= "T7-Caspase-caspase 8-Human-pro-Asp 2(a) delta

FT TM fusion protein"

FT sig_peptide 43..87

FT /tag= b

FT /note= "Caspase leader sequence"

FT mat_peptide 88..1275

FT /label= Mature Asp_2(a)

FT /note= "Also encodes 5 extra N-terminal amino acids

FT constituting a caspase 8 cleavage site"

FT

XX WO200149098-A2.

XX 12-JUL-2001.

XX PD 09-MAY-2001; 2001WO-IB000798.

XX PR 09-MAY-2001; 2001WO-IB000798.

XX PA (BIEN/) BIENKOWSKI M J.

XX PA (GURN/) GURNEY M E.

XX PA (HEIN/) HEINRIKSON R L.

XX PA (PARO/) PARODI L A.

XX PA (YANR/) YAN R.

XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

DR P-PSDB; AAU06615.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Example 9; Page 158; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of

CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2

CC transmembrane domain and the Asp2 protein, and where the polypeptide and

CC the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. The invention also details polynucleotides for the Asp proteins

CC and vectors expressing them, and a polypeptide (isoform of amyloid

CC protein precursor (APP)) comprising the amino acid sequence of an APP or

CC its fragment containing an APP cleavage site recognizable by a mammalian

CC beta-secretase, and further comprising two lysine residues at the

CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP

CC fragment. Also included in the invention are methods of identifying

CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are

CC useful for treating Alzheimer's disease. APP is useful in methods for

CC identifying inhibitors or modulators of human Asp2 activity and amyloid-

CC beta (Abeta) peptide production. APP is also useful in designing

CC therapeutics for the treatment or prevention of Alzheimer's disease. APP

CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is

CC associated with increased levels of Abeta processing is useful for

CC relating the Alzheimer's research. The expression vector is useful for

CC recombinantly expressing APP. Nucleic acids that hybridize to Asp

CC oligonucleotides are useful as probes or primers. The probes are useful

CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and

CC Southern blots. The present sequence encodes T7-Caspase- caspase 8-Human-

CC pro-Asp 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid

CC purification when expressed in E. coli, a Caspase leader sequence and a

XX caspase 8 cleavage signal to aid cleavage of the signal peptide

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x NAS11529 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	283
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

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31 ArgSerGlyLeuGlyGlyAlaPro      38
|||||:|||||:|||||:|||||
242 AGGAGGGGTGGTGGGCGACACCC      219
```

Sequence name: rngp2ndb:ABU52469

Sequence documentation:

ID ABU52469 standard; cDNA; 1278 BP.

XX ABU52469;

XX 16-JUL-2002 (first entry)

XX T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)deltaTM nucleotide.

DE Human; Asp-1; Aspartyl protease; Alzheimer's disease; proteolytic;

KW amyloid precursor protein; APP; gene; ss.

XX Homo sapiens.

XX OS

XX Key Location/Qualifiers

XX

XX

XX

FT CDS 1..1278
 FT /tag= a
 FT /product= "T7-caspase-caspase 8 cleavage-human-pro- Asp-
 FT 2(a)deltaTM"
 XX GB2367060-A.
 XX
 XX 27-MAR-2002.
 XX
 XX 29-OCT-2001; 2001GB-00025934.
 XX
 XX 23-SEP-1999; 99US-00404133.
 XX 23-SEP-1999; 99US-0155493P.
 XX 23-SEP-1999; 99WO-US020881.
 XX 13-OCT-1999; 99US-00415901.
 XX 06-DEC-1999; 99US-0169232P.
 XX 22-SEP-2000; 2000GB-00023315.
 XX
 XX (PHARMA) PHARMACIA & UPJOHN CO.
 XX
 XX PI Bienkowski MJ, Gurney M;
 XX WPI; 2002-397167/43.
 XX P-PSDB; ABB78602.
 XX
 XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl
 XX protease activity, e.g. for the diagnosis of Alzheimer's disease.
 XX
 XX Example 9; Page 128; 182pp; English.
 XX
 XX The present invention describes a human aspartyl protease 1 (hu-Asp1)
 XX substrate (I) which comprises a peptide of no more than 50 amino acids,
 XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
 XX Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
 XX proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
 XX (I) under acidic conditions; and (b) determining the level of hu-Asp1
 XX proteolytic activity; (2) a purified polynucleotide (III) comprising a
 XX nucleotide sequence that hybridises under stringent conditions to the non
 XX coding strand complementary to a defined 1804 nucleotide sequence (see
 XX AB52436) where the nucleotide sequence encodes a polypeptide having Asp1
 XX proteolytic activity and lacks nucleotides encoding a transmembrane
 XX domain; (3) a purified polynucleotide (III') comprising a sequence that
 XX hybridises under stringent conditions to (III) (the nucleotide sequence
 XX encodes a polypeptide further lacking a pro-peptide domain corresponding
 XX to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)
 XX comprising (III) or (III'); and (5) a host cell (V) transformed or
 XX transfected with (III), (III'), and/or (IV). The hu-Asp1 protease
 XX substrate (I) may be used as an enzyme substrate in assays to detect
 XX aspartyl protease activity, (II) and therefore diagnose diseases
 XX associated with aberrant hu-Asp1 expression and activity such as
 XX Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
 XX hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
 XX sequence encodes T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)deltaTM,
 XX which is given in an example from the present invention
 XX
 XX SO Sequence 1278 BP; 284 A; 356 C; 353 G; 265 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x AB52469 ..
 Alignment segment 1/1: (-)
 Matching length: 26.00
 Matching Percent: 87.50
 Total Percent Similarity: 87.50
 Gaps: 0
 Total Percent Identity: 62.50
 Alignment:
 31 ArgserglyleuglyglyAlaPro 38
 |||::||| |||::|||
 242 AGAAGGCGGTGGCGGCGACGCC 219

Sequence name: rngp2ndb:ADJ94339
 Sequence documentation:
 ID ADJ94339 standard; cDNA; 1278 BP.
 XX
 XX ADJ94339;
 XX
 XX 03-JUN-2004 (first entry)
 XX
 XX Human T7-Caspase-Caspase 8 cleavage-human-pro-Asp-2(a)deltaTM cDNA.
 XX
 XX Human; ss; gene: aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);
 XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;
 XX neurotropic; neuroprotective; amyloid beta; mutant.
 XX
 XX Homo sapiens.
 XX Synthetic.
 XX OS
 XX PN US6706485-B1.
 XX
 XX PD 16-MAR-2004.
 XX
 XX PF 12-APR-2000; 2000US-00548376.
 XX
 XX PR 24-SEP-1998; 98US-0101594P.
 XX 23-SEP-1999; 99US-00404133.
 XX 23-SEP-1999; 99US-0155493P.
 XX 23-SEP-1999; 99WO-US020881.
 XX 13-OCT-1999; 99US-00415901.
 XX
 XX (PHARMA) PHARMACIA & UPJOHN CO.
 XX
 XX PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
 XX WPI; 2004-236722/22.
 XX P-PSDB; ADJ94340.
 XX
 XX Identifying agents that modulate activity of Asp2 aspartyl protease
 XX useful for treating or preventing Alzheimer's disease involves comparing
 XX APP processing activity of protease in presence and absence of test
 XX agent.
 XX
 XX PS Disclosure; SEQ ID NO 27; 109pp; English.
 XX
 XX The invention relates to identifying agents that modulate activity of
 XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
 XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid
 XX precursor protein (APP) in the presence and absence of a test agent,
 XX where Asp2 is a recombinant polypeptide and processes APP into amyloid
 XX beta, determining APP processing activity of Asp2 in presence and absence
 XX of the test agent, and comparing the activities to identify agents that
 XX modulate the activity of Asp2. Also disclosed are the cDNA and proteins
 XX for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
 XX nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
 XX the vector and the method of producing Hu-Asp polypeptide, an isolated
 XX antibody that specifically binds to Hu-Asp polypeptides, identifying a
 XX cell that can be used to screen for inhibitors of beta secretase
 XX activity, novel isoforms of amyloid protein precursor (APP), where the
 XX last 2 carboxy terminus amino acids of that isoform are both lysine
 XX residues (e.g. those designated APP695-KK or carrying the Swedish
 XX mutation where KM at 595-596 is mutated to NN, designated e.g. APP695-Sw
 XX or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
 XX for assaying for beta secretase activity and screening for inhibitors of
 XX beta-secretase) and polynucleotides that encode the APP proteins. The
 XX method is useful for identifying agents that modulate the activity
 XX (amyloid precursor protein processing activity) of Asp2 aspartyl
 XX protease. Preferably, the method is useful for identifying agents that
 XX inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
 XX precursor protein processing, are useful for treating or preventing
 XX Alzheimer's disease. The present sequence encodes an aspartyl protease
 XX mutant construct (e.g. lacking a transmembrane domain and/or including a
 XX caspase cleavage site) used to investigate the cleavage activity of Asp2
 XX proteins.

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD094339 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	283
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro      38
|||::|||::|||::|||::|||::|||
242 AGGAGGGGCGGCGGCGCACGCC      219

```

Sequence name: rngp2ndb:AD050435

Sequence documentation:

ID AD050435 standard; DNA; 1278 BP.

AC AD050435;

DT 29-JUL-2004 (first entry)

DE T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm DNA.

KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP; Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX Key

FT CDS

Location/Qualifiers
1..1278
/*tag= a
/product= "T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm protein"

XX US6737510-B1.

PD 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

DR P-PSDB; AD050436.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's

PT disease.

XX Example 9; SEQ ID NO 27; 108pp; English.

XX The invention relates to a method for identifying an agent that decreases

CC the protease activity of the aspartyl protease (Asp) polypeptide. It also

CC provides enzyme and enzymatic procedures for cleaving the beta secretase

CC cleavage site of the amyloid precursor protein (APP). The invention is

CC useful in preparing a composition for treating or preventing Alzheimer's

CC disease. It is also useful in gene therapy. The present sequence is T7-

CC Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm chimeric DNA. This

CC sequence is used to illustrate the method of the invention.

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050435 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	283
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro      38
|||::|||::|||::|||::|||::|||
242 AGGAGGGGCGGCGGCGCACGCC      219

```

Sequence name: rngp2ndb:ADR75348

Sequence documentation:

ID ADR75348 standard; DNA; 1278 BP.

AC ADR75348;

DT 18-NOV-2004 (first entry)

DE T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm DNA.

KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KW chromosome identification; Alzheimer's disease; human; caspase; chimeric;

XX gene; ds.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX Key

FT CDS

Location/Qualifiers
1..1278
/*tag= a
/product= "T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm protein"

XX US2004166507-A1.

PD 26-AUG-2004.

XX 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWSKI M J.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-624916/60.

DR P-PSDB; ADR75349.

XX Novel purified/isolated polynucleotide encoding polypeptide having

PT aspartyl protease activity involved in processing amyloid precursor

PT protein into amyloid beta, useful in identifying agent decreasing

PT activity of aspartyl protease.
 XX
 XX Example 9; SEQ ID NO 27; 107bp; English.
 CC The invention relates to nucleic acid sequences encoding aspartyl
 CC protease (asp) polypeptides having aspartyl protease activity involved in
 CC processing amyloid precursor protein (APP) into amyloid beta. The
 CC invention also relates to a method for identifying an agent that
 CC decreases the protease activity of the Asp. Asp DNA is useful in
 CC chromosome identification as they can hybridise with a specific location
 CC on a human chromosome and in identifying the relationship between genes
 CC and diseases (particular gene responsible for causing diseases). It is
 CC also useful for identifying gene candidates to modulate the progression of
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
 CC in diagnostic assay for detecting Hu-asp polypeptide expression. The
 CC present invention is the 17-Caspase-Caspase 8 cleavage-Human-pro-asp-
 CC 2(a)delatATM DNA. This sequence is used to illustrate the method of the
 CC invention.
 XX
 SQ Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADR75348 ..
 Alignment segment 1/1: (-)

Matching Length:	26.00	Score:	283
Matching Percent:	87.50	Matching Percent Identity:	8
Total Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

 Alignment:
 31 ArgSerGlyLeuGlyGlyAlaPro 38
 |||::||| |||::|||
 242 AGGAAGGGGTGGGGGCGACGCC 219
 Sequence name: rng2ndb:ADC81562
 Sequence documentation:
 ID ADC81562 standard; DNA; 1365 BP.
 XX
 AC ADC81562;
 XX
 DT 01-JAN-2004 (first entry)
 XX
 DE Recombinant BACE encoding DNA from pET11a-P33K-BACE SEQ ID NO:8.
 XX
 KM human; BACE; modification; Pro33lys; pro-enzyme; gene; ds.
 XX
 OS Synthetic.
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT CDS 1..1365
 FT /tag= b
 FT /product= "recombinant BACE P33K"
 FT sig_peptide 1..69
 FT /tag= a
 FT mat_peptide 70..1365
 FT /tag= c
 FT /product= "mature recombinant P33K BACE ((seqid:2))"
 FT
 PN WO2003072733-A2.
 PD 04-SEP-2003.
 XX
 PF 21-FEB-2003; 2003WO-US005508.
 XX
 PR 21-FEB-2002; 2002US-0358651P.
 XX
 PA (PHAA) PHARMACIA & UPJOHN CO.
 XX

PI Chou K, Howe JM;
 XX
 DR WPI; 2003-712719/67.
 XX
 DR P-PSDB; ADC81563, ADC81561.
 XX
 PT BACE polypeptides having Pro33lys modification, useful in determining
 PT possible mutations, which will inhibit enzyme activity, and in
 PT determining potential active site for target molecules.
 XX
 PS Claim 13; Fig 4A-B; 38pp; English.
 XX
 CC The present invention describes an isolated polypeptide (1) comprising or
 CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),
 CC and comprising human BACE having the modification Pro33lys. Also
 CC described: (1) a composition comprising an active human BACE enzyme
 CC comprising the pro-enzyme sequence of BACE having the modification
 CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding
 CC (1); (3) an isolated polynucleotide consisting or comprising of
 CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an
 CC expression vector comprising the polynucleotide of (2), or a
 CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
 CC expression vector can produce the Pro33lys-BACE polypeptide when present
 CC in a compatible host cell, when cultured under conditions that allow
 CC production; (5) a recombinant host cell comprising the expression vector;
 CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
 CC polypeptide having Pro33lys modification may be used in determining
 CC possible mutations, which will inhibit enzyme activity, and in
 CC determining potential active site for target molecules. The vector
 CC comprising the BACE polynucleotide is useful for producing recombinant
 CC BACE polypeptides having Pro33lys modification. The present sequence
 CC encodes recombinant BACE expressed from a pET11a-P33K-BACE construct,
 CC from the present invention.
 XX
 SQ Sequence 1365 BP; 296 A; 382 C; 394 G; 293 T; 0 U; 0 Other;
 Alignment of: us-10-726-967a-1 x ADC81562 ..
 Alignment segment 1/1: (-)

Matching Length:	26.00	Score:	283
Matching Percent:	87.50	Matching Percent Identity:	8
Total Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

 Alignment:
 31 ArgSerGlyLeuGlyGlyAlaPro 38
 |||::||| |||::|||
 332 AGGAAGGGGTGGGGGCGACGCC 309
 Sequence name: rng2ndb:ADJ57780
 Sequence documentation:
 ID ADJ57780 standard; DNA; 1365 BP.
 XX
 AC ADJ57780;
 XX
 DT 06-MAY-2004 (first entry)
 XX
 DE DNA sequence for BACE WT R57DEL.
 XX
 KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
 KM Alzheimer's disease; ds.
 XX
 OS Synthetic.
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT CDS 1..1365
 FT /tag= a
 FT /product= "BACE protein"
 FT
 PN WO2004011641-A2.

```

XX 05-FEB-2004.
PD 25-JUL-2003; 2003WO-GB003200.
XX 26-JUL-2002; 2002US-0398681P.
XX (ASTE-) ASTEX TECHNOLOGY LTD.
XX Vulliamd LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX WPI: 2004-169242/16.
XX P-PSDB; ADJ57781.
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
XX preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX syndrome.
XX Disclosure; SEQ ID NO 9; 145bp; English.
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
XX protein. The compound or the composition is useful in medicine and the
XX BACE crystal structure is useful for drug discovery. The BACE protein,
XX compounds, pharmaceutical compositions, medicament, drug or other
XX composition comprising the compound is useful for treating or preventing
XX Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
XX present sequence represents the DNA sequence for a BACE encoding
XX sequence.
XX Sequence 1365 BP; 292 A; 392 C; 398 G; 283 T; 0 U; 0 Other;
XX Alignment of: us-10-726-967a-1 x ADJ57780 ..
XX Alignment segment 1/1: (-)
XX Matching length: 26.00 Total length: 283
XX Matching Percent Similarity: 87.50 Matching Percent Identity: 8
XX Total Percent Similarity: 87.50 Total Percent Identity: 62.50
XX Gaps: 0
XX Alignment:
XX 31 ArgSerGlyLeuGlyGlyAlaPro 38
XX |||::||| |||::|||
XX 329 AGGAAGGGGTGGGGGCGACACCC 306
XX Sequence name: rngp2ndb:ADJ57784
XX Sequence documentation:
XX ID ADJ57784 standard; DNA; 1368 BP.
XX AC ADJ57784;
XX DT 06-MAY-2004 (first entry)
XX DE DNA sequence for BACE N-Q R56KR57KNOHIS.
XX KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX Alzheimer's disease; ds.
XX OS Synthetic.
XX FH Key Location/Qualifiers
XX FT 1..1368
XX FT /*tag= a
XX FT /product= "BACE protein"
XX PN WO2004011641-A2.
XX PD 05-FEB-2004.
XX 25-JUL-2003; 2003WO-GB003200.

```

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XX 26-JUL-2002; 2002US-0398681P.
XX (ASTE-) ASTEX TECHNOLOGY LTD.
XX Vulliamd LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX WPI: 2004-169242/16.
XX P-PSDB; ADJ57785.
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
XX preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
XX syndrome.
XX Disclosure; SEQ ID NO 13; 145bp; English.
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
XX protein. The compound or the composition is useful in medicine and the
XX BACE crystal structure is useful for drug discovery. The BACE protein,
XX compounds, pharmaceutical compositions, medicament, drug or other
XX composition comprising the compound is useful for treating or preventing
XX Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
XX present sequence represents the DNA sequence for a BACE encoding
XX sequence.
XX Sequence 1368 BP; 290 A; 392 C; 403 G; 283 T; 0 U; 0 Other;
XX Alignment of: us-10-726-967a-1 x ADJ57784 ..
XX Alignment segment 1/1: (-)
XX Matching length: 26.00 Total length: 283
XX Matching Percent Similarity: 87.50 Matching Percent Identity: 8
XX Total Percent Similarity: 87.50 Total Percent Identity: 62.50
XX Gaps: 0
XX Alignment:
XX 31 ArgSerGlyLeuGlyGlyAlaPro 38
XX |||::||| |||::|||
XX 332 AGGAAGGGGTGGGGGCGACACCC 309
XX Sequence name: rngp2ndb:ADJ57776
XX Sequence documentation:
XX ID ADJ57776 standard; DNA; 1368 BP.
XX AC ADJ57776;
XX DT 06-MAY-2004 (first entry)
XX DE DNA sequence for BACE WT R56KR57K.
XX KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
XX Alzheimer's disease; ds.
XX OS Synthetic.
XX FH Key Location/Qualifiers
XX FT 1..1368
XX FT /*tag= a
XX FT /product= "BACE protein"
XX PN WO2004011641-A2.
XX PD 05-FEB-2004.
XX 25-JUL-2003; 2003WO-GB003200.
XX 26-JUL-2002; 2002US-0398681P.
XX (ASTE-) ASTEX TECHNOLOGY LTD.

```

XX Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX MPI, 2004-169242/16.
DR P-PSDB; ADJ57777.
XX
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX
XX Disclosure; SEQ ID NO 5; 145bp; English.
XX
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE encoding
CC sequence.
XX
SQ Sequence 1368 BP; 295 A; 392 C; 398 G; 283 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ57776 ..
Alignment segment 1/1: (-)
Matching Quality: 26.00 Score: 283
Percent Similarity: 87.50 Total length: 8
Total Percent Similarity: 87.50 Matching Percent Identity: 62.50
Gaps: 0 Total Percent Identity: 62.50
Alignment:
31 ArgSerGlyLeuGlyGlyAlaPro 38
|||:|||||:|||||:|||||
332 AGGAAAGGGGTGGGGGCGACGACCC 309
Sequence name: rngp2ndb:ADJ57788
Sequence documentation:
ID ADJ57788 standard; DNA; 1383 BP.
XX
AC ADJ57788;
XX
DT 06-MAY-2004 (first entry)
XX
DE DNA sequence for BACE N-Q R57KDEL.
XX
KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KM Alzheimer's disease; ds.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..1383
FT /tag= a
FT /product= "BACE protein"
XX
PN WO2004011641-A2.
XX
PD 05-FEB-2004.
XX
PF 25-JUL-2003; 2003WO-GB003200.
XX
PR 26-JUL-2002; 2002US-0398681P.
XX
PA (ASTE-) ASTEX TECHNOLOGY LTD.
XX
PI Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX MPI, 2004-169242/16.
DR

DR P-PSDB; ADJ57789.
XX
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT syndrome.
XX
XX Disclosure; SEQ ID NO 17; 145bp; English.
XX
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE encoding
CC sequence.
XX
SQ Sequence 1383 BP; 294 A; 401 C; 402 G; 286 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ57788 ..
Alignment segment 1/1: (-)
Matching Quality: 26.00 Score: 283
Percent Similarity: 87.50 Total length: 8
Total Percent Similarity: 87.50 Matching Percent Identity: 62.50
Gaps: 0 Total Percent Identity: 62.50
Alignment:
31 ArgSerGlyLeuGlyGlyAlaPro 38
|||:|||||:|||||:|||||
329 AGGAAAGGGGTGGGGGCGACGACCC 306
Sequence name: rngp2ndb:ADJ57782
Sequence documentation:
ID ADJ57782 standard; DNA; 1386 BP.
XX
AC ADJ57782;
XX
DT 06-MAY-2004 (first entry)
XX
DE DNA sequence for BACE N-Q R56KR57K.
XX
KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KM Alzheimer's disease; ds.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..1386
FT /tag= a
FT /product= "BACE protein"
XX
PN WO2004011641-A2.
XX
PD 05-FEB-2004.
XX
PF 25-JUL-2003; 2003WO-GB003200.
XX
PR 26-JUL-2002; 2002US-0398681P.
XX
PA (ASTE-) ASTEX TECHNOLOGY LTD.
XX
PI Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX MPI, 2004-169242/16.
DR P-PSDB; ADJ57783.
XX
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT

FT syndrome.
XX Dislosure; SEQ ID NO 11; 145pp; English.
PS
XX The present invention relates to a beta site APP cleaving enzyme (BACE)
CC protein. The compound or the composition is useful in medicine and the
CC BACE crystal structure is useful for drug discovery. The BACE protein,
CC compounds, pharmaceutical compositions, medicament, drug or other
CC composition comprising the compound is useful for treating or preventing
CC Alzheimer's disease or Alzheimer's s-type pathology of Down's syndrome. The
CC present sequence represents the DNA sequence for a BACE encoding
CC sequence.
XX
SQ Sequence 1386 BP; 297 A; 401 C; 402 G; 286 T; 0 U; 0 Other;
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Alignment segment 1/1: (-)
Quality: 26.00
Matching Length: 8
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Total Percent Identity: 62.50
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Total Length: 8
62.50
62.50
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31 ArgSerGlyLeuGlyGlyAlaPro 38
332 AGGAAAGCGGTGCGGCGCAGCACCC 309
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Sequence documentation:
ID AAV41697 standard; cDNA; 2370 BP.
XX AAV41697;
XX
XX 26-OCT-1998 (first entry)
XX
XX Partial nucleotide sequence of human ASP2 (aspartic protease 2).
XX
XX Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;
KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;
KW prohormone processing; ss.
XX
XX Homo sapiens.
XX
XX
XX Key Location/Qualifiers
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FT /transl_except= (pos:2290..2292,aa:Xaa)
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FT /note= "stop codon specified in the protein"
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FT /note= "stop codon specified in the protein"
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FT /note= "stop codon specified in the protein"
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FT /note= "stop codon specified in the protein"
FT 1843..1845
FT /tag= g
FT /note= "stop codon specified in the protein"
FT 1873..1875
FT /tag= h
FT /note= "stop codon specified in the protein"
FT 1891..1893
FT /tag= i
FT /note= "stop codon specified in the protein"
FT 2005..2007
FT /tag= j
FT /note= "stop codon specified in the protein"
FT 2011..2013
FT /tag= k
FT /note= "stop codon specified in the protein"
FT 2029..2031
FT /tag= l
FT /note= "stop codon specified in the protein"
FT 2152..2154
FT /tag= m
FT /note= "stop codon specified in the protein"
FT 2164..2166
FT /tag= n
FT /note= "stop codon specified in the protein"
FT 2179..2181
FT /tag= o
FT /note= "stop codon specified in the protein"
FT 2254..2256
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FT /note= "stop codon specified in the protein"
FT 2332..2334
FT /tag= q
FT /note= "stop codon specified in the protein"
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XX BP855444-A2.
XX
XX 29-UTL-1998.
XX
XX 27-JAN-1998; 98EP-00300573.
XX
XX 28-JAN-1997; 97GB-00001684.
XX
XX (SMIT) SMITHKLINE BEECHAM PLC.
XX (SMIT) SMITHKLINE BEECHAM CORP.
XX
XX Powell DJ, Smith TS, Chapman CG, Murphy K;
XX WPI; 1998-389809/34.
XX P-PsDB; AAM59808.
XX
XX New nucleic acid encoding human aspartic protease 2 - used to treat,
XX prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone
XX processing.
XX
XX Dislosure; Page 8-9; 26pp; English.
XX
XX This is the nucleotide sequence of the partial human ASP2 (aspartic
CC

CC protease 2), used in the method of the invention. Agonists and
CC antagonists for ASP2 immunospecific antibodies are used to treat
CC conditions requiring increased or decreased activity or expression of
CC ASP2 respectively. ASP2 is used to treat and diagnose e.g. Alzheimer's
CC disease, cancer and pro-hormone processing and ASP2 or a fragment can be
CC used to induce an immune response against the above conditions
XX

SO Sequence 2370 BP; 579 A; 605 C; 609 G; 561 T; 0 U; 16 Other;

Alignment of: ua-10-726-967a-1 x AA41697 ..

Alignment segment 1/1: (-)

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Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro
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155 AGGAAGGGGTGGGGGCGACACCC

38
132

Sequence name: rmgp2ndb:AA40939

Sequence documentation:

ID AA40939 standard; cDNA; 2559 BP.

XX AA40939;

DT 17-DEC-2001 (first entry)

XX cDNA encoding novel human enzyme polypeptide #155.

XX Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;

KW ligase; hyperproliferative disorder; immunodeficiency disorder;

KW autoimmune disorder; neurological disorder; metabolic disorder;

KW inflammatory disorder; cardiovascular disorder; reproductive disorder;

KW blood-related disorder; infectious disorder; gene therapy; cytostatic;

KW anti arthritic; nephrotoxic; anticoagulant; ss.

XX Homo sapiens.

XX WO200155301-A2.

XX 02-AUG-2001.

PD 17-JAN-2001; 2001WO-US001239.

XX 31-JAN-2000; 2000US-0179065P.

PR 04-FEB-2000; 2000US-0180628P.

PR 24-FEB-2000; 2000US-0184664P.

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PR 18-APR-2000; 2000US-0198123P.

PR 19-MAY-2000; 2000US-0205515P.

PR 07-JUN-2000; 2000US-0209467P.

PR 28-JUN-2000; 2000US-0214886P.

PR 30-JUN-2000; 2000US-0215135P.

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PR 14-AUG-2000; 2000US-0224518P.

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PR 14-AUG-2000; 2000US-0225266P.
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PR 08-DEC-2000; 2000US-0251990P.
PR 11-DEC-2000; 2000US-0254097P.
PR 05-JAN-2001; 2001US-0259678P.
PA (HUMA-) HUMAN GENOME SCI INC.
PI Rosen CA, Barash SC, Ruben SM;
DR MPI; 2001-465566/50.
XX P-PSDB; AAU23069.
XX
PT Novel polypeptides and polynucleotides useful for diagnosing, preventing,
PT creating neutral, immune system, muscular, reproductive, pulmonary,
PT cardiovascular, renal, proliferative disorders and cancerous diseases.
XX
XX
PS Claim 4; SEQ ID NO 165; 1180bp; English.
XX
XX The present invention relates to the isolation of novel human enzyme
CC polypeptides (AAU2915-AAU2314), and the cDNA and genomic sequences
CC encoding them. The enzyme polypeptides of the invention may comprise the
CC functional classes of oxidoreductases, transferases, hydrolases, lyases,
CC isomerases or ligases. The sequences of the invention are useful in the
CC diagnosis, treatment, prevention and/or prognosis of a wide range of
CC disorders including hyperproliferative disorders (e.g. cancer),
CC immunodeficiency disorders (e.g. AIDS), autoimmune disorders (e.g.
CC arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic
CC disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma),
CC cardiovascular disorders (e.g. atherosclerosis), blood-related disorders
CC (e.g. haemophilia), reproductive disorders (e.g. infertility) and
CC infectious disorders (e.g. influenza). The polynucleotides of the
CC invention can also be used in gene therapy. AAS40785-AAS41684 represent
CC cDNA sequences encoding for the novel human polypeptides of the
CC invention. Note: The sequence data for this patent did not form part of
CC the printed specification, but was obtained in electronic format directly
CC from WIPO at ftp.wipo.int/pub/published_pct_sequences

XX
SQ Sequence 2559 BP, 604 A, 669 C, 667 G, 619 T, 0 U, 0 Other;
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Alignment segment 1/1: (-)
Matching Length: 26.00
Matching Percent Similarity: 87.50
Total Percent Similarity: 87.50
Total Length: 283
Total Percent Identity: 8
Total Percent Identity: 62.50
Gaps: 0
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Sequence name: rngp2nrb:AAS40939
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ID AAS40939 standard; cDNA; 2559 BP.
AC AAS40939;
XX
DT 17-DEC-2001 (first entry)
XX
DE cDNA encoding novel human enzyme polypeptide #155.
XX
XX Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;
KW ligase; hyperproliferative disorder; immunodeficiency disorder;
KW autoimmune disorder; neurological disorder; metabolic disorder;
KW inflammatory disorder; cardiovascular disorder; reproductive disorder;
KW blood-related disorder; infectious disorder; gene therapy; cytoskeletal;
KW anti arthritic; nephrotropic; anticoagulant; ss.
XX
OS Homo sapiens.
XX
PN MO200155301-A2.
XX
PD 02-AUG-2001.
XX
XX 17-JAN-2001; 2001WO-US001239.
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XX 31-JAN-2000; 2000US-0179065P.
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PR 11-DEC-2000; 2000US-0254097P.
PR 05-JAN-2001; 2001US-0259678P.

PA (HUMA-) HUMAN GENOME SCI INC.
XX
PI Rosen CA, Barash SC, Ruben SM;
XX WPI; 2001-465566/50.
XX DR P-PSDB; AAU23069.
XX
PT Novel polypeptides and polynucleotides useful for diagnosing, preventing,
PT treating neural, immune system, muscular, reproductive, pulmonary,
XX cardiovascular, renal, proliferative disorders and cancerous diseases.
XX
PS Claim 4; SEQ ID NO 165; 1180bp; English.
XX
CC The present invention relates to the isolation of novel human enzyme
CC polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences
CC encoding them. The enzyme polypeptides of the invention may comprise the
CC functional classes of oxidoreductases, transferases, hydrolases, lyases,
CC isomerases or ligases. The sequences of the invention are useful in the
CC diagnosis, treatment, prevention and/or prognosis of a wide range of
CC disorders, including hyperproliferative disorders (e.g. cancer),
CC immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g.
CC arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic
CC disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma),
CC cardiovascular disorders (e.g. atherosclerosis), blood-related disorders
CC (e.g. haemophilia), reproductive disorders (e.g. infertility) and
CC infectious disorders (e.g. influenza). The polynucleotides of the
CC invention can also be used in gene therapy. AAU40785-AAU41684 represent
CC cDNA sequences encoding for the novel human enzyme polypeptides of the
CC invention. Note: The sequence data for this patent did not form part of
CC the printed specification, but was obtained in electronic format directly
CC from WIPO at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 2559 BP; 604 A; 669 C; 667 G; 619 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS40939 ..
Alignment segment 1/1: (+)

Quality:	24.00	Score:	289
Matching length:	9	Total length:	9
Matching Percent Similarity:	77.78	Matching Percent Identity:	44.44
Total Percent Similarity:	77.78	Total Percent Identity:	44.44
Gaps:	0		

Alignment:

30	LeuArgSerGlyLeuGlyGlyAlaPro	38
:		
:		
:		
:		
:		
1773	GTTTCAGGACGGCAGCGGTGGAAAGGCC	1799